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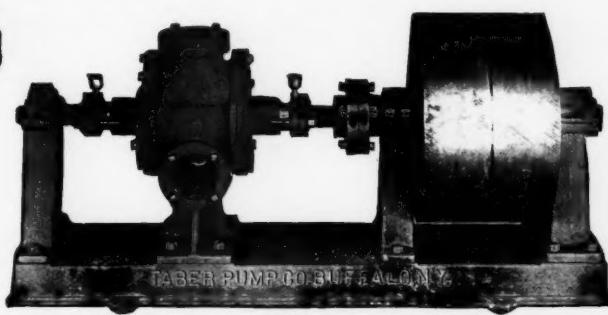
PUBLISHED EVERY SATURDAY

MARCH 10, 1917

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THE

NATIONAL PROVISIONER

OFFICIAL ORGAN OF THE AMERICAN MEAT PACKERS' ASSOCIATION

PUBLISHED EVERY SATURDAY

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Vol. 56.

New York and Chicago, March 10, 1917.

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MEAT PRODUCTION IN FEBRUARY.

Official reports of marketing of meat animals at six chief centers for the month of February show that during that month 20,000 more cattle were received at six markets than in February, 1916, while for the two months the increase was 210,000 head, indicating a February slump in comparative receipts. Hog marketing at these points was 26,000 less in February than a year ago, and the two months' comparative deficiency was 340,000 head. Receipts of sheep and lambs were 18,000 less than in February, 1916, while for the two months the comparative deficiency was 13,000 head.

Slaughter reports from these six chief markets indicate the extent of order trade for outside packers. Cattle slaughters for February at six points were 26,000 head more than a year ago, and for the two months 165,000 head greater. Hog marketing was 240,000 less than in February, 1916, and for the two months 600,000 less than for a like period a year ago. Slaughters of sheep and lambs at these six points were 26,000 less in February than a year ago, and 6,000 less for the two months.

A synopsis of official reports of receipts at six markets for February is as follows, with totals compared:

	Cattle.	Calves.	Hogs.	Sheep.
Chicago	205,904	41,291	792,210	282,038
Kansas City	131,916	8,870	234,968	149,739
Omaha	100,621	.....	377,484	237,330
St. Louis	77,575	.....	293,012	24,637
St. Joseph	33,551	3,426	200,430	84,596
Sioux City	41,212	982	256,674	21,048
Tl. Feb., '17.	590,770	54,560	2,154,778	799,358
Tl. Feb., '16.	560,457	45,472	2,415,740	817,553

Receipts for two months ending February, 1917, compare as follows:

	Cattle.	Calves.	Hogs.	Sheep.
Chicago	514,770	92,487	1,916,302	588,156
Kansas City	303,675	18,874	509,186	324,205
Omaha	247,870	.....	818,588	521,252
St. Louis	195,764	.....	663,289	56,708
St. Joseph	77,811	7,485	442,855	149,488
Sioux City	98,046	1,858	571,200	52,145
Tl. 2 mos., '17.	1,437,928	120,704	4,911,420	1,691,955
Tl. 2 mos., '16.	1,224,628	85,498	5,254,103	1,678,860

Slaughters at six points for February compare as follows:

	Cattle.	Calves.	Hogs.	Sheep.
Chicago	149,703	38,960	584,275	237,658
Kansas City	74,294	11,131	198,389	102,356
Omaha	59,270	.....	236,390	167,285
St. Louis	62,580	.....	189,753	23,426
St. Joseph	22,951	2,282	192,593	57,733
Sioux City	19,917	845	140,548	18,261
Tl. Feb., '17.	388,605	53,218	1,491,948	606,719
Tl. Feb., '16.	362,975	43,117	1,733,172	628,541

Slaughters for two months ending February, 1917, compare as follows:

	Cattle.	Calves.	Hogs.	Sheep.
Chicago	379,158	85,541	1,376,173	480,560
Kansas City	165,485	27,018	440,501	228,946
Omaha	154,474	.....	521,846	371,528
St. Louis	161,735	.....	341,008	54,405
St. Joseph	52,116	5,462	427,597	116,634
Sioux City	48,634	1,614	308,211	42,394
Tl. 2 mos., '17.	961,602	119,635	3,410,338	1,303,457
Tl. 2 mos., '16.	797,195	80,610	4,019,788	1,309,459

*Calves not separately reported.

AGRICULTURAL BILL PASSED.

With a total of \$25,831,213 for the fiscal year 1918, the agricultural appropriation bill slipped through Congress in the early morning hours of March 4. In the midst of the long and hot fight over the armed ship bill the Senate stopped long enough to agree to the conference report on this and the naval bill. The bill originally passed the House on January 8 and the Senate on February 8, and it remained in conference thereafter, where a number of difficulties were smoothed out.

The meat inspection service and the Bureau of Animal Industry is allowed \$3,445,326. In addition, \$60,000 is set aside for experiments and demonstrations in livestock production in the cane sugar and cotton districts, and \$50,000 for experiments in dairy-ing and livestock production in semi-arid and irrigated districts.

Permission is also given for the Department to spend as high as \$1,000,000, if necessary, to fight foot-and-mouth disease and other contagious animal infections, providing that any such expenditures must be from whatever remainder there may be from the \$2,500,000 appropriated for this purpose in the budget for the fiscal year 1915.

It is significant that the stipulation for "investigation of tuberculosis in cattle" was struck out in the conference, so that of the \$134,800 provided for the scientific investigation of animal diseases nothing can be spent for this vital work.

The principal expenditures for other bureaus are as follows: Weather Bureau, \$1,796,640; Bureau of Plant Industry, \$3,123,630; Forest Service, \$5,709,275; Bureau of Chemistry, \$1,200,591; Bureau of Soils, \$363,735; Bureau of Entomology, \$931,480; Bureau of Biological Survey, \$592,707; Division of Publications, \$213,990; Division of Crop Estimates, \$232,452; States Relations Service, \$3,127,600; Public Roads and Rural Engineering, \$598,200; Bureau of Markets, \$1,088,575.

LITTLE CHANCE FOR FOOD PROBE.

There is little chance for a federal food probe investigation until an extra session of Congress takes some action. The provision to appropriate \$400,000 to be spent for this purpose by the Federal Trade Commission died with the sundry civil appropriation bill. The \$6,000,000 bill introduced by Senator Borah of Idaho on February 27 did not get out of committee.

The commission has announced its determination to start some kind of an investigation with the spare funds on hand, trusting that additional money will be supplied by the coming special session of the 65th Congress. It is difficult to see how this can be done, inasmuch as plans have already been made to give furloughs without pay to a number of special investigators, statisticians and examiners now at work on projects, but whose salaries cannot be paid much longer because of the failure of the late 64th Congress to pass appropriation bills.

FEDERAL INSPECTED SLAUGHTERS.

The Federal meat inspection authorities report that slaughters of animals under government inspection during the year 1916 exceeded inspected slaughtering of the previous year, except in the case of sheep. Inspected slaughters in 1916 totaled as follows, compared to 1915:

	1916.	1915.
Cattle	8,310,458	7,153,395
Calves	2,367,303	1,818,702
Sheep	11,941,366	12,211,765
Goats	198,900	153,346
Hogs	43,073,703	38,381,228

WILSON ASKS BETTER HOG RATE.

The Interstate Commerce Commission is considering the complaint of Wilson & Company against the Chicago, Milwaukee & St. Paul, to the effect that the rate on hogs from Sioux Falls to Chicago should be lowered from 30 cents to 24.5 cents. The 30 cent rate has been in effect for twenty years. The complaint is based on the case of Daniels v. the Rock Island, which case, avers the defendant in his reply brief, does not apply to the present set of facts.

HOGS PASS THE 15-CENT MARK.

Live hogs reached and passed the 15c. mark in Chicago this week. It was reported that the top on Tuesday was 15.05c.

MEAT SITUATION IN THE UNITED STATES

Production, Consumption and Prices as Shown by Statistics

By George K. Holmes, U. S. Bureau of Crop Estimates.

(Continued from issue of February 24.)

[EDITOR'S NOTE.—This report, the most important result of the appointment of the Galloway Commission several years ago, was summarized in a recent issue of *The National Provisioner*. Showing, as it does, that meat production has not kept pace with consumption, it will be of the greatest interest to producers and consumers alike.]

CONSUMPTION OF MEAT.

Total Pounds in Many Countries.

The mind of the reader should now dismiss thoughts of meat production and think of meat in terms of consumption. Every country produces some meat, a portion of which is exported; and every country imports meat, a portion of which is re-exported. The net result of all operations is the meat that remains for national consumption.

For many countries other than the United States, Germany and the United Kingdom, the per capita averages of number of pounds of meat consumed in a year have been multiplied into the population for the year adopted by the estimator, and thus the number of pounds of meat consumed within the country during the year is computed. All of Asia except Siberia is excluded from the list of countries for which per capita meat consumption has been ascertained, and all of the Western Hemisphere except Canada, United States, Cuba and Argentina. Nevertheless, the Asiatic exceptions are of people who are not meat eaters, and the exceptions in the Western Hemisphere together form no large fraction of the meat-eating population of the world.

The countries for which the meat consumption is known or has been estimated are these: Argentina, Austria-Hungary, Australia, Belgium, Canada, Cuba, Denmark, France, Germany, Greece, Italy, the Netherlands, New Zealand, Norway, Poland (Russian), Portugal, Russia (except Poland), Spain, Sweden, Switzerland, the United Kingdom, the United States.

The total consumption of beef, mutton and pork and their products in these countries in the latest year for which statements have been published, according to accurate reports, estimates and computations, as the case may be, amounts to 47,957,000,000 pounds, dressed weight. This represents the bulk of the meat consumption of the world, but not for a recent year in all countries. The consumption is approximately the production. If the consumption of unrepresented countries is included, and if a statement for all countries were obtainable for a recent year, probably the total would be much above 50,000,000,000 pounds dressed weight, and with the inclusion of the extra-edible parts the total may be above 60,000,000,000 pounds.

The population of the countries in the foregoing list, according to the latest censuses and estimates, is about 514,000,000, and these people are the bulk of the world's meat-eaters in any considerable degree.

United States.

The consumption of meat and meat products in the United States is estimated to have been 13,792,000,000 pounds, dressed weight, in 1900, and, according to the census, 15,450,000,000 pounds in 1909, 11,708,000

pounds of goat meat not included. The beef consumption not including veal, dressed weight, increased from 6,020,000,000 pounds to 6,968,000,000 pounds; the veal consumption decreased from 758,000,000 pounds to 684,000,000 pounds; and the consumption of beef and veal, dressed weight, increased from 6,778,000,000 pounds to 7,652,000,000 pounds.

Mutton consumption including lamb is relatively small, and increased from 586,000,000 pounds in 1900 to 602,000,000 pounds in 1909, dressed weight still being understood. It is observable that mutton consumption is perceptibly lower than veal consumption.

Pork and pork products lead beef and beef products not including veal in quantity of consumption. In 1900, 6,427,000,000 pounds of pork and pork products, dressed weight, were consumed, and, in 1909, 7,196,000,000 pounds. But if veal is included with beef, the pork consumption is below that of beef and veal.

The extra-edible parts are nearly 18 per cent. of the dressed weight of cattle, sheep, and swine in consumption, and make a large total for the United States. These parts of the carcass aggregated 2,615,000,000 pounds for 1900 and 2,763,000,000 pounds for 1909. A trifle more than one-half of the total belongs to beef and veal.

Upon adding the weight of the extra-edible parts to the dressed weight, the total consumption of meat and meat products in the United States reaches the enormous total of 16,407,000,000 pounds in 1900 and 18,212,000,000 pounds in 1909, goat meat not included. Nearly one-half of this consumption is that of beef and veal. Mutton consumption declined from 3.75 per cent. of the total in 1900 to 3.47 per cent. in 1909. Dressed weight and the weight of extra-edible parts still being combined, the pork consumption of 1900 was 7,684,000,000 pounds, and in 1909 it was 8,530,000,000 pounds.

Other Countries.

The various countries must be compared in terms of dressed weight. As has already been stated, the consumption of the United States in 1909 was 15,450,000,000 pounds. Less than one-half of this amount was consumed in Germany in 1913, or 7,399,000,000 pounds. The consumption of Russia (except Poland) has not been ascertained for a year subsequent to 1899, when it amounted to 6,024,000,000 pounds. Perhaps by 1913, for which year Germany's latest consumption is known, Russia had equaled if not exceeded Germany's consumption.

The fourth country in order of total consumption of meat and meat products, dressed weight, is the United Kingdom, with 5,174,000,000 pounds consumed in 1906, and next after the United Kingdom is France with 3,096,000,000 pounds consumed in 1904.

Austria-Hungary, although having a low per capita consumption of meat, yet on account of its large population consumes a great total, amounting to 2,640,000,000 pounds in 1890, the latest year for which an estimate could be found. Possibly it was greater in recent years and exceeded the French total.

According to the investigation of the director-general of public health, Italy consumed 1,533,000,000 pounds of meat and meat products in 1901; the Australian consumption in 1902 is estimated to have been 1,008,000,000 pounds; Canada's consumption in 1910 was 962,000,000 pounds; Spain's consumption in 1890 was 869,000,000 pounds; Argentina's consumption in 1899 was 616,000,000 pounds; the consumption of Russian Poland is estimated to have been 610,000,000 pounds in 1899. No other country in the list has a consumption record as high as 500,000,000 pounds.

It is observable that the beef, mutton, and pork consumption of the United States,

(Continued on page 28.)

JANUARY MEAT EXPORTS GREATER.

Exports of meat products in January were over 18 million dollars greater in value than for the same month a year ago, according to government reports. Exports of canned beef were 600,000 pounds more; fresh beef, 7 million pounds more; pickled beef, 6 million pounds more; bacon, 41 million pounds more; hams, 2 million pounds more; lard, 31 million pounds more; lard compounds, 4 million pounds more. Decreases were in pickled pork, 8 million pounds less; oleo oil, 2 million pounds less; neutral lard, half a million pounds less.

For the seven months' period since July 1 last exports increased in value 42 million dollars compared to the like period a year ago. Increases were in bacon, 55 million pounds; lard, 31 million pounds; hams, 8 million pounds more; pickled beef, 4 million pounds more; canned beef, about 4 million pounds more; lard compounds, a million pounds more. Exports of fresh beef were 42 million pounds less; pickled pork, 25 million pounds less; oleo oil, 20 million pounds less; neutral lard, 8 million pounds less.

A comparison of export quantities and values between January and a year ago is as follows:

	Jan., 1917.	Jan., 1916.
Beef, canned, lbs.	1,709,243	1,192,693
Beef, canned, value.....	\$425,594	\$261,931
Beef, fresh, lbs.....	17,415,651	10,414,115
Beef, fresh, value.....	\$2,044,075	\$1,191,701
Beef, pickled, etc., lbs.....	9,064,658	3,331,134
Beef, pickled, etc., value.....	\$1,055,470	\$341,079
Oleo oil, lbs.....	3,797,396	5,693,511
Oleo oil, value.....	\$696,652	\$687,395
Bacon, lbs.....	91,812,209	50,086,770
Bacon, value.....	\$14,475,626	\$6,957,702
Hams and shoulders, lbs.....	26,570,086	24,043,571
Hams and shoulders, value.....	\$4,520,664	\$3,639,339
Lard, lbs.....	65,061,290	34,039,513
Lard, value.....	\$10,725,117	\$3,727,649
Neutral lard, lbs.....	2,137,206	2,677,864
Neutral lard, value.....	\$408,438	\$303,739
Pork, pickled, etc., lbs.....	13,287,688	21,666,247
Pork, pickled, etc., value.....	\$1,958,969	\$2,344,097
Lard compounds, lbs.....	47,283,776	67,910,466
Lard compounds, value.....	\$1,070,962	3,889,537

Export comparisons for the seven months, compared to a like time last year, are as follows:

	7 months, 1916-17.	7 months, 1915-16.
Beef, canned, lbs.....	28,554,764	25,025,057
Beef, canned, value.....	\$6,617,749	\$3,981,362
Beef, fresh, lbs.....	88,530,465	130,764,098
Beef, fresh, value.....	\$10,818,465	\$16,534,982
Beef, pickled, etc., lbs.....	30,800,513	26,511,027
Beef, pickled, etc., value.....	\$3,416,779	\$2,794,062
Oleo oil, lbs.....	47,283,776	67,910,466
Oleo oil, value.....	\$6,990,789	\$8,019,015
Bacon, lbs.....	379,065,112	324,297,302
Bacon, value.....	\$59,329,532	\$43,293,675
Hams and shoulders, lbs.....	154,078,394	146,593,295
Hams and shoulders, value.....	\$26,412,977	\$20,394,659
Lard, lbs.....	245,651,268	214,951,231
Lard, value.....	\$37,652,880	\$22,250,147
Neutral lard, lbs.....	11,599,648	18,252,122
Neutral lard, value.....	\$1,879,472	\$2,133,925
Pork, pickled, etc., lbs.....	47,993,089	72,750,621
Pork, pickled, etc., value.....	\$6,655,005	\$7,808,266
Lard compounds, lbs.....	32,547,680	31,848,353
Lard compounds, value.....	\$4,283,090	\$2,816,900

CAUSES AND CURES FOR HOG TUBERCULOSIS

Disease Most Prevalent in Dairy Sections of the Country

By Dr. John R. Mohler, Assistant Chief, U. S. Bureau of Animal Industry, and H. J. Washburn, Senior Bacteriologist.

(Continued from last week.)

EDITOR'S NOTE.—This report on the prevalence of hog tuberculosis in this country was reviewed in the columns of *The National Provisioner*, but its importance warrants its publication in full, particularly what the authorities say regarding causes of this disease in hogs and measures to be taken to wipe it out.

Infection Through Milk of Tuberculous Cows.

Numerous experiments conducted by many scientists in various countries are in accord relative to the ease with which hogs may contract tuberculosis from being fed on milk of tuberculous cows. When hogs were fed on tuberculous milk for only three days the postmortem examination held 107 days later showed that 83.3 per cent. of the animals had become tuberculous. When hogs received tuberculous milk for thirty days and were allowed to live fifty days longer, 100 per cent. had developed generalized tuberculosis.

That similar experiences occur under natural conditions on the farm has been proved by tracing certain shipments of tuberculous herds to the farm where they were raised and fattened. In one instance a shipment of 74 hogs showed tuberculosis in 61, and investigation brought out the fact that the swine had been fed on the skimmed milk of a creamery in a near-by town. *The separator slime from two of the creameries in this town was obtained for experimental purposes, and the inoculation test showed that one of these samples produced tuberculosis in all the guinea pigs inoculated.*

Centrifugal separators have come into general use. In the process of separating the cream from the milk the rapid revolutions of the shaft and disks of the machine deposit at the base of the shaft dirt, hair, manure, and other impurities, and, mingled with this mass, great numbers of bacteria, including at times the germs of tuberculosis.

The charge has been repeatedly made that the germs of tuberculosis are scattered by means of the common practice of distributing the separated milk or other by-products among the farmers who constitute the patrons of the creamery. To test this point careful search has been made of samples of the separator sediment from a number of creameries located in widely removed dairy regions to see if they really harbored virulent tuberculosis germs.

When first received at the laboratory this material is examined microscopically. Following this examination all samples, whether showing the presence of suspicious bacteria or not, are injected into guinea pigs, where the presence of living tuberculosis germs is soon determined by the development of tubercular lesions. *As a result of such an examination of the products from fifteen creameries it has been definitely shown that 33 1/3 per cent. of the samples examined contained virulent germs of tuberculosis.*

How Creameries Spread the Disease.

There are no doubt many creameries to which no infected milk is delivered and from which the separated milk when divided among the creamery patrons is a safe and valuable article of food for calves and pigs. But there are, unfortunately, others, as above indicated, which receive milk daily from one or more

cows so affected with tuberculosis that they give off the germs of that disease, and these germs find their way in large numbers into the cans of separated milk which are returned to the farmers from these creameries.

In this way a single cow with a tuberculous udder may spread the disease to numbers of hogs, and may also infect many farms in a large section of country that have never been contaminated before with this destructive disease. This particular means of spreading tuberculosis could be absolutely prevented by cooking the milk, yet in the majority of cases this simple precaution is not taken.

In one State a lot of hogs which contained 36 per cent. of tuberculous animals was traced to the farm of the raiser, and the State authorities were notified. They made a tuberculin test of the cattle producing the milk, with the result that about 22 per cent. of them reacted. This infected milk had been separated on the farm with a hand separator and the skimmed milk fed to the hogs.

It will thus be seen that creameries are not alone at fault, but the skimmed milk from the hand separator, if it comes from a tuberculous herd, is equally dangerous. The buttermilk produced at the creamery from the infected separated cream is likewise capable of carrying tuberculosis germs and infecting the animals which consume it.

The one great advantage from a hygienic standpoint which the milk from a hand separator has over the milk from a public creamery is that in the former case the milk from an infected herd is usually fed to only one lot of hogs. On the other hand, the skimmed milk from the creamery is generally all mixed together in a vat and each farmer takes back with him his proportionate share of skimmed milk, which is most likely to be produced by several herds of other people's cattle. Hence the skimmed milk of but one tuberculous herd is liable, as a result of this practice, to contaminate the entire product of the vat into which it is placed.

For this reason it behoves hog raisers to

see that their skimmed milk has been properly heated before they feed it. Legislation making such heating by creameries compulsory affords a simple and easy way of greatly reducing hog tuberculosis.

Infection by Feces of Cattle.

A very important source of infection of hogs with tuberculosis, and one which closely rivals tuberculous by-products from public creameries, is to be found in the feces of tuberculous cattle. It is a very common practice to allow hogs to accompany cattle about the feed lot, and while doing this they thoroughly work over the feces and feed upon whatever portions of food have passed undigested through the digestive tract of the cattle. In herds that are healthy this manner of feeding may be commended because of the economy, but wherever there are tuberculous individuals among the cattle the danger of passing the infection on to the hogs by means of the feces becomes very great.

In a series of investigations by the bureau it was found that the feces of tuberculous cattle are often loaded with tuberculosis germs. Tuberculin-tested hogs were placed in isolated pens where a few shovelfuls of such feces were thrown daily while the hogs were fed upon other feed which was free from tuberculosis. The result was the infection of 25 per cent. of the first lot of hogs and 100 per cent. of the second lot that were exposed. The tuberculous condition of the cattle was shown only by the tuberculin test, as they were apparently healthy, having no cough or any visible indications of disease.

A striking instance of probable infection of hogs by cattle feces came under observation. Of 34 hogs which were marketed in one lot 23 were found diseased, and upon investigation it was ascertained that the owner had a herd of dairy cows, the stable manure from which was thrown into the hog yard. The hogs were given no milk, nor were they permitted to mingle with the cattle, but were pastured and fed on corn and what they could gather from the cow manure. In fact, the latter form of exposure was the only plausible explanation of infection, and this was later accepted when the tuberculin test of the herd revealed 19 out of the 27 cows diseased. This test was confirmed when the cattle were slaughtered and found to be tuberculous, some in an advanced stage.

(To be continued.)

Buying Hogs "Subject"

"Sooner or later the packer and slaughterer are going to buy hogs subject to the post-mortem inspection—and the hog raiser who continues to fatten his hogs with tuberculous material should be made to sustain the losses arising from his lack of knowledge, skepticism or indifference."

"When the packer buys subject to the post-mortem results the intelligent hog-raiser will get more for his healthy hogs than he does now, and the careless breeder will get less for his tuberculous hogs, which is as it should be."—DR. JOHN R. MOHLER, ASSISTANT CHIEF, U. S. BUREAU OF ANIMAL INDUSTRY.

STOCKS OF PROVISIONS.

Official reports of stocks of provisions at five principal centers at the end of February show stocks about level with a month ago, but less than a year ago, except in cut meats. The comparison is as follows:

	Fork. Bbls.	Feb. 28,	Jan. 31,	Feb. 29,
			1917.	1916.
Chicago	47,886	47,688	54,185,429	92,279,588
Kansas City	6,346	6,271	5,560	6,573
Omaha	3,895	3,141	4,599	
St. Joseph	4,009	3,141	3,997	
Milwaukee	7,086	7,395	7,810	
Total	69,312	68,055	97,953	
	Lard, Lbs.			
Chicago	51,416,286	54,185,429	92,279,588	
Kansas City	2,060,822	2,048,144	4,803,870	
Omaha	3,926,406	3,368,136	4,552,100	
St. Joseph	3,621,921	6,065,528	3,097,884	
Milwaukee	379,800	1,329,550	1,872,150	
Total	61,605,235	68,496,787	106,515,592	
	Cut Meats, Lbs.			
Chicago	139,024,175	120,731,340	132,525,563	
Kansas City	52,782,000	52,869,200	54,889,300	
Omaha	43,591,501	45,182,415	43,942,492	
St. Joseph	35,726,082	32,945,361	32,516,820	
Milwaukee	19,258,237	20,975,786	20,617,212	
Total	290,381,095	272,710,102	284,788,387	

PRACTICAL POINTS FOR THE TRADE

[EDITOR'S NOTE.—Nothing but actual, bona fide inquiries are answered on this page of "Practical Points for the Trade." The National Provisioner uses no "made-up" queries, with answers taken out of old, out-of-date books. The effort is made to take up and investigate each question as it comes in, and to answer it as thoroughly as time and space will permit, with a view to the special need of that particular inquirer. It must be remembered that the answering of these questions takes time, and that the space is necessarily limited, and the inquirers must not grow impatient if the publication of answers is delayed somewhat. It should also be remembered that packing-house practice is constantly changing and improving, and that experts seldom agree, so that there is always room for honest difference of opinion. Readers are invited to criticize what appears here, as well as to ask questions.]

PEPSIN AND RENNET.

A subscriber in the West writes for the following:

Editor The National Provisioner:

Please give me what information you can concerning the manufacture of rennet and pepsin as packinghouse by-products.

The raw material for the manufacture of pepsin is the inside linings or membranes of the stomachs of various animals. However, those of the hog are usually employed. The stomachs are split open and carefully cleaned. The inside mucous lining is removed by simply pulling off from the outside tissues and placing in cold water. In washing the stomachs no scrubbing or otherwise brisk handling must be indulged in; they are merely carefully washed clean so as not to lose much pepsin.

The linings are immersed in a weak solution of muriatic acid, about 3 per cent., and allowed to remain in this solution for 36 to 48 hours, or until they are entirely dissolved. The temperature must not be under 100 degs. Fahr. or over 120 degs. Fahr. Frequent stirring will facilitate dissolution.

As a solution of the linings is apt to spoil very readily, especial care should be exercised to provide against all contamination and undue exposure to impure atmosphere.

A further safeguard against decomposition, and one which will produce a product of light

color at the same time, is by treating the solution with sulphur dioxide gas, conducted into the bottom of the container directly from a gas generator. When all the undissolved mucus and the solid particles have subsided a clear liquid will remain, which is siphoned or skimmed off.

Salt greatly aids precipitation, and in no wise affects the pepsin, which is not soluble by salt. The temperature during settling may be reduced to 94 degs. Fahr. When no more cloudy precipitate separates and rises to the surface in the shape of a yellowish scum, then the operation is complete.

The scum floating on the surface of the liquid is the crude pepsin of the market. This must be pressed and dried in a manner similar to that with the purified article, as follows:

The purification of the pepsin is accomplished by dialysis, which is the passing of the non-pepsin substances contained in the crude pepsin solution, the salt employed for precipitation, etc., through animal or vegetable membranes, the pepsin not being dialysable remaining behind in a purified state. A repeated application of this process produces the purer and stronger, the more active grades of pepsin.

When all of the salts have passed through the dialysing membrane, the remaining pepsin solution is evaporated at the lowest possible temperature, preferably in a vacuum apparatus at from 100 to 104 degs. Fahr. The remaining solution is poured and spread in a very thin layer on glass plates having raised edges, when the remaining water is driven off as rapidly as possible at a low temperature by means of warm air blown through the room. This air must be absolutely pure and free from dust or odorous contamination.

When the pepsin has dried it is removed from the glass plates by scraping and represents now the pure scale pepsin of the market. A conservative estimate of the yield is about

3½ per cent. by weight of pure pepsin, or approximately 2 pounds of such pepsin from 100 stomach linings.

The manufacture of pepsin is a slow and careful process, and unless in comparatively large volume is not a paying proposition. The large pharmaceutical preparation concerns and some big packers are about the only ones attempting the manufacture of pepsin.

Rennet is prepared from the fourth stomach of the calf, washed, dried and then treated with a salt solution. The rennet is then precipitated from this and dried. One part of this powdered ferment will coagulate 200,000 parts of milk in cheese-making. Unless a plentiful supply of stomachs are available it would not pay to enter this field.

MEAT INSPECTION CHANGES.

Recent changes in the federal meat inspection service are reported as follows: Meat inspection inaugurated: David Mayer & Company, 520-526 Westchester avenue, New York, N. Y.; *Nathan Grabenheimer, 354 Johnson avenue, Brooklyn, N. Y.; The Jenkins-Kirby Packing Company, Forty-Fort, Pa., mail Wilkes-Barre, Pa.; Armour & Company, 20-24 West Michigan street, Duluth, Minn.; *Inter-County Co-operative Packing Company, New Richmond, Wis.

Meat inspection temporarily suspended: *Gregory Farm Laboratory, White Hall, Ill.

Meat inspection reinaugurated following suspension: The Haserot Canneries Company, Forestville, N. Y.

Changes in names of establishments: *The Thomas J. Kurdele Company, 3811 Eastern avenue, Highlandtown, Baltimore, Md., instead of Thos. J. Kurdele; *Augusta Packing Company, New Savannah Road, mail P. O. Box 818, Augusta, Ga., instead of Augusta Abattoir.

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JULIUS A. MAY, Treasurer.
OTTO V. SCRENK, Secretary.
PAUL I. ALDRICH, Editor.

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PACKING FIFTEEN CENT HOGS

Packers paid as high as 15.05 cents per pound for hogs on the hoof at Western markets this week, and had to pay that to get them. This is a record, of course. There is no sign of a let-down, and a recognized market authority soberly says that "a shortage in marketable hogs at this time borders on a calamity."

Hogs at 15 cents per pound afoot means that the dressed chilled hog, including head and feet, stands the packer at least 19½ cents per pound. And it must be a good hog, and not "filled," to make this minimum cost. Then must be taken into account the loss in rendering the lard. Leaf lard will lose at least 10 per cent. in rendering; back fat, 20 per cent.; ham facings and fat trimmings, 50 per cent., and so on.

And still the packers are charged with the responsibility for high meat prices. No wonder the trade welcomes any kind of an investigation which will acquaint the public with the actual facts!

NO LAW TO COMPEL REFORM

The standardization of butter packages and the production of a more uniform quality of product are but two requirements of butter markets to which creameries need to give consideration if they wish to improve conditions for the marketing of their butter, say specialists of the Office of Markets and Rural Organization of the U. S. Department of Agriculture in Department Bulletin 456, recently issued.

At certain seasons the market specialists found on the markets an increasing quantity of an inferior quality of butter which is known as "under-grades." This inferior quality, it developed, is often due to the use of cream of poor quality and, to some extent, to faulty methods of manufacture. The more common faults observed in the quality of this butter were soft, leaky, open body; too much or not enough salt; too high or too light color; metallic flavors; high acid, unclean, and old cream flavors; streaks and mottles; mold on butter; also moldy and dirty packages.

Approximately one-tenth of the butter received in the larger markets is placed in cold storage, the bulletin states, and is held for an average period of six months. The cost of storing butter approximates one-fourth of a cent per pound per month. In the market distribution of creamery butter there is at present a tendency toward the more general use of consumers' packages, usually of the 1-pound size.

It is pointed out by the specialists that the establishment of brands is essential for effective advertising. Salesmanship is also a vital factor in successful market distribution. It is highly important in marketing a branded product that a sanitary and attractive package be used, and that a certain standard of quality in the product be maintained. These are official recommendations of the United States Department of Agriculture. Unfortunately, they are not backed up by any law regulating butter production, or providing for its inspection, as is the case with meats. If there were such a law there might not be so much dirty and disease-spreading dairy product put on the market.

EXCESSIVE WAR PROFITS

Previous experiences in the material side of preparedness in the case of a sudden war emergency have taught the country a lesson. That excessive profits in army supplies are to be prevented in the event of hostilities is indicated by the fact that the Council of National Defense has called on the Chamber of Commerce of the United States for assistance and advice in purchases to be made by the army quartermasters. The National Chamber recently passed a resolution providing that the basis of supply of government

requirements in war and peace from private sources should be at a rate of profit so low as to preclude a profit interest in war.

"The Chamber of Commerce of the United States will gladly respond to Secretary Baker's call," said Bascom Little, chairman of the National Chamber Committee on National Defense, and former president of the Cleveland Chamber of Commerce, "because it feels that the special knowledge of many of its members concerning business problems and policies could be of value to the government, particularly in relation to the very large purchases of supplies of all kinds for the military service."

The Chamber of Commerce of the United States has determined its policy quite clearly concerning the basis upon which private industry and the government should co-operate in both peace and war. They believe it is very desirable that private plants brought into the government service in the defense problem should be insured a small profit on the supplies, and that it is exceedingly unwise to rely upon any supply system which is economically unsound.

It is equally unwise to permit large profits to a few people through the making of supplies for the government and the stock market speculation which inevitably follows that process. The basis of profit should be a guaranteed return of a small percentage on the book value of the assets of the company. The inevitable economic disturbance following a declaration of war should be minimized to the greatest extent possible by the use of the government credit.

Such civilian and expert aid as is suggested by the Secretary of War in purchasing supplies is in line with the best experience in foreign countries now at war arrived at after experimentation and work. Scores of committees made up of civilian experts, purchasing agents, manufacturers in special lines, and the like, are now engaged in supervising the purchase of all supplies, centralizing and co-ordinating the work. It has been found an absolutely necessary agency in the efficient mobilization of industry. The Chamber of Commerce will arrange at once, with the aid of member organizations, for committees to co-operate with depot quartermasters in all cities in which such depots are located.

The army appropriation bill of August 29, 1916, created the Council of National Defense, consisting of six Cabinet officers and an advisory committee of seven civilians. This council has now organized and is attempting to get its machinery of operation in order so that the business men of the country and private industries will have a definite point of contact with the government. The call on the Chamber of Commerce of the United States is a definite step in this direction.

TRADE GLEANINGS

Fire destroyed the cotton gin of the Cowpens Cotton Oil Company's plant at Cowpens, S. C.

A plant to cost \$35,000 will be built in Syracuse, N. Y., by the Jacob Dold Packing Company.

A. Boyd, L. R. Boyd and others are the incorporators of the Crescent Cotton Oil Co., Memphis, Tenn.

The Walpole Packing Company, Silkeston, Mo., has been incorporated with a capital stock of \$15,000.

The seed house of the Morrilton Cottonseed Oil & Gin Company at Mayflower, Ark., has been destroyed by fire.

The plant of the Arkansas Fertilizer Company, 2220 East Fifth avenue, Argenta, Kan., has been destroyed by fire.

Fire damaged the plant of the Carstens Packing Company at Tacoma, Wash. The loss is estimated at \$325,000.

The capital stock of the New Zanesville Provision Company, Zanesville, Ohio, has been increased from \$50,000 to \$100,000.

Fire damaged the office and several buildings of the Kuhner Packing Company's plant at Muncie, Ind., causing a loss of \$15,000.

The seed storage house of the Southland Cotton Oil Company, Wynnewood, Okla., recently destroyed by fire, will be rebuilt.

Paul Jourdain, Inc., Piscataway, Middlesex County, N. J., to deal in food products, has

been incorporated with a capital stock of \$25,000.

The Consolidated Stock Yards, Grand Crossing, Fla., has been incorporated with a capital stock of \$100,000 by John M. Stevens and others.

It is reported that the new municipal slaughterhouse in Asylum street, Bridgeport, Conn., erected at a cost of \$25,000, has been opened and is in operation.

The Genesee Provision Company, Rochester, N. Y., has been incorporated with a capital stock of \$50,000 by Henry L. Marsh, L. G. Marsh and Edward C. O'Brien.

The organization of a company for the purpose of establishing a cheese factory at Dandridge, Tenn., is being promoted by T. A. Carmichael, Samuel McMurry and others.

The Royal Packing Company, Cincinnati, Ohio, has been incorporated with a capital stock of \$50,000 by P. Treat, F. E. Dyas, Lewis Gregg, H. C. Lamprecht and L. M. Kleist.

Atwater-Bradley Corporation, Genoa, N. Y., to deal in farm products, fertilizer, etc., has been incorporated with a capital stock of \$80,000 by J. D. Atwater, Jessie Atwater and A. P. Bradley.

The capital stock of the Fesenmeier Packing Company, Huntington, W. Va., has been increased from \$25,000 to \$50,000, and improvements and additions to double the capacity of the plant will be made.

WILSON & CO.'S 1916 REPORT.

The annual financial statement of Wilson & Company for the year 1916 was made public this week. It shows that the company handled 30 per cent. more cattle and hogs at its plants than in 1915, and the result was increased packing facilities and distributive equipment. Profits for the year, after deducting interest and depreciation, were \$5,710,358. The report says:

"We also extended our activities in the manufacture of many by-products, thus realizing increased profits from the sale of finished articles rather than selling the material in the raw state. This expansion has been aided by vigorous sales and advertising policies. To carry out the idea of utilizing the by-products to the fullest extent, the company within the past year has provided,* or has in the course of preparation, facilities for the manufacture of glue, lard oils, tallow oils, hydrogenated fats, benzolized lard and commercial fertilizer. Other important extensions for the utilization of by-products will be provided."

"Our curled hair business, the product of which is principally used by automobile manufacturers, shows a very substantial increase over 1915, and within the last six months the erection of an additional four-story building was found necessary. A very important addition to the company's manufacturing facilities has been the establishment of a cottonseed oil and compound lard refinery at Chattanooga, Tenn."

"During 1916 there has been a continuation of the constant increases in the price of livestock. Some idea of the advance is shown below from figures compiled by the Chicago Farmers' and Drovers' Journal, giving a comparison of the average price per 100 pounds of different kinds of livestock in December, 1916, as against the same month in 1915:

	December—	1916.	1915.
Cattle	\$10.00	\$8.45	
Hogs .....	.95	5.65	
Lambs	12.70	9.60	
Sheep	9.00	6.20	
Calves	11.75	9.65	

"We are pursuing a policy of closer cooperation with the livestock producer, as we believe there is room for great improvement in quality as well as increase in quantity, which improvement should be beneficial to producer, packer and consumer, and our policy is to co-operate in such a way that these results will be obtained."

"The condensed income account is as follows: Balance at December 25, 1915, \$6,830,212; Deduct: Adjustment of surplus covering reorganization expenses, bond discount, losses through detained steamers and all other uncertain items of previous years not hitherto fully ascertainable, \$1,683,500; balance, \$5,146,652; add: Profits for the year ending December 30, 1916, after deducting depreciation and interest on current debts, \$5,710,357; less: Interest on debentures (retired during the year) and mortgage bonds, \$796,485; total, \$10,060,526; deduct: Dividends paid on preferred stock, \$700,714; balance at December 30, 1916, \$9,359,812."

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PROVISIONS AND LARD

WEEKLY REVIEW

All articles under this head are quoted by the barrel, except lard, which is quoted by the hundredweight in tierces, pork and beef by the barrel or tierce and hogs by the hundredweight.

Trading Excited—New High Records Made—

Hogs Advanced—Receipts Light—Distribution Good—Shipments Continue Large.

The past week has shown a further advance to new high records with trading excited at the advance. Later prices reacted sharply. Hogs and product have both advanced and the rise in the market has not encouraged a large movement on the one hand from the country nor has it apparently materially affected the distribution from the interior packing points. The rise in hogs has been so pronounced that the situation is to a certain extent spectacular. The prices made this week have covered the market to between \$14.50@14.75 for live hogs, which show a pronounced advance over the average of last week. Last week's average at Chicago of \$13.25 was a record quotation in that market since weekly averages have been kept.

The prices for product reached \$34.00 for May pork, \$19.52 for May lard and \$17.95 for May ribs, which exceeds any previous quotations on record since the currency values following the Civil War. The price of pork in 1864 rose as high as \$44, in September, in 1865 the high price was \$38 in August, in 1866 \$34 in August and in 1869 \$34 in both June and August. In 1864 lard sold at \$23.50 in September, in 1865 \$30 in September, in 1866 \$23 in May, in 1869 \$20.75. With the exception of the prices named, which in view of the currency premium cannot be considered as representing higher actual values than those now pre-

vailing, prices have been making records.

The monthly statement of stocks, details of which are available from the leading packing points, do not show any important influence due to the advancing prices. Stocks of lard decreased a little during the month but the stocks of meats increased. This is looked upon as showing that the effect of the high prices has not been such as to really disturb the home and foreign distribution to an extent which might be recognized as having an important bearing on values. The stocks of product at the six leading western packing points at Chicago, Milwaukee, Kansas City, St. Louis, Omaha and St. Joseph as compiled by the Chicago Trade Bulletin, follow:

	March 1, 1917.	Feb. 1, 1917.	March 1, 1916.
Mess pork, bbls...	13,295	15,351	27,583
Other pork, bbls...	60,160	56,944	24,645
P. S. lard, lbs....	36,334,337	45,193,031	90,000,210
Other lard, lbs....	29,108,541	27,613,682	19,808,630
S. P. hams, lbs....	93,949,003	80,405,814	90,748,979
S. P. Sk. hams, lbs.	27,066,703	25,767,903	27,896,323
S. P. picnics, lbs....	20,820,777	18,950,687	26,701,020
S. P. bellies, lbs....	21,376,909	21,874,277	28,674,827
S. P. shoulders, lbs....	1,963,812	3,425,023	3,631,476
S. P. hindquarters, lbs....	1,963,812	3,425,023	3,027,481
Short rib sides, lbs....	25,750,445	26,906,420	26,317,012
Ex. Sh. rib S., lbs...	2,431,680	1,872,791	2,962,858
Sh. clear sides, lbs...	1,142,561	1,145,346	2,447,187
Ex. Sh. Cl'r S., lbs...	4,320,631	5,919,510	5,096,029
D. S. bellies, lbs....	37,169,877	35,882,962	35,937,270
Sh. F. backs, lbs....	23,186,674	15,166,983	18,307,273
Other meats, lbs....	64,228,817	59,317,741	60,290,839
Total meats, lbs....	331,664,040	312,833,481	330,679,869

The shipments of product from Chicago continue heavy. The shipments of the past week of fresh and cut meats as well as lard exceeded last year, notwithstanding the ex-

traordinary prices. The shipments for the season have shown an increase of cut meats while the shipments of lard have shown a decrease. The export movement of provisions is somewhat irregular. Recently the shipments of lard have not been so heavy and there has been a falling off in the total shipments since November 1st compared with last year. The exports of meats, however, have been heavy, amounting for the week just ending to 28,344,000 pounds and the total shipments of meats since November 1st have been 316,536,000 pounds. The amount of meats under contract is believed to be heavy so that large shipments will continue, and there are also reports of quite large amounts of lard under contract.

There is some speculation as to whether the lower price of cattle compared with hogs will affect the distribution of hog products to any extent. This is not at all certain, however, as the prices of beef products are very high. The foreign demand for beef and beef products continues good and there is a steady absorption of offerings notwithstanding the high prices which prevail. The shipments of beef products are large as well as the shipments of hog products.

The movement of hogs has not been so heavy recently, partly due to the weather conditions and partly due to the traffic conditions. Packing the past week was 599,000 against 708,000 the previous week and 641,000 last year. The packing for the season has been 15,356,000 against 15,076,000 last year.

The packing figures, and the reports of hog product stocks, permit of some inter-

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March 10, 1917

esting comparisons. The figures on packing follow:

	1916-'17.	1915-'16.
Summer season (Mch. 1—Nov. 1)	19,407,000	16,866,000
Winter season (Nov. 1—Mch. 1)	15,356,000	15,076,000

Total 34,763,000 31,772,000

Estimating the eastern packing the same as last year, 6,703,000, it would bring the total season packing to 41,466,000 subject to later corrections against a total of 39,305,000 last year.

The product stocks at Chicago for the beginning and end of the summer and winter season follows:

	March 1, 1916.	Nov. 1, 1916.	March 1, 1917.
Lard, lbs.	88,278,000	39,490,000	51,416,000
Meats, lbs.	132,825,000	81,503,000	139,024,000

All product, lbs. 221,103,000 116,450,000 189,539,000

The stocks last year at the beginning and end of the winter packing season were as follows:

	Nov. 1, '15.	Mar. 1, '16.
Lard, lbs.	64,915,000	92,280,000
Meats, lbs.	63,558,000	139,025,000

Total product, lbs. 138,103,000 239,350,000

The stocks at the six leading Western points follow:

	March 1, 1916.	Nov. 1, 1916.	March 1, 1917.
Lard, lbs.	106,808,000	45,906,000	65,443,000
Meats, lbs.	330,679,000	151,731,000	331,664,000

These figures indicate that the increased meat production has been taken care of during the year, while the consumption of it has been 44,000,000 in excess of the product.

LARD.—The market is very firm for all grades. Prices have made further high levels. Demand, while not large, is quite persistent and there is no evidence of spot pressure. Quoted city, Western, \$19.50@19.60; Middle West, \$19.40@19.50; refined Continent, \$20.75; South American, \$20.90; Brazil, kegs, \$21.95; compound, \$14.62@15.25.

BEEF.—The position of the market is unchanged. Values are very firm. Stocks are small and there is very little stuff offering to be cured. Mess, \$24.00@24.50; packet, \$25.00@26.00; family \$26@28; extra India, \$45@46.

PORK.—The market continues very firm at new high levels. Offerings are light from the interior and with the prices of hogs varying packers show wide variation in asking prices. Mess, \$35@35.50; clear, \$34@38, and family, \$37@38.

SEE PAGE 29 FOR LATER MARKETS.

EXPORTS OF HOG PRODUCTS.

Exports of hog products from New York reported up to March 7, 1917:

HOGS.—Colombia, 2 hd.; Panama, 3 hd.
BACON.—Bermuda, 85 lbs.; British Honduras, 46 lbs.; British West Indies, 4,298 lbs.; Canary Islands, 210 lbs.; Cuba, 104,142 lbs.; England, 3,352,357 lbs.; France, 3,424,675 lbs.; Hayti, 248 lbs.; Honduras, 342 lbs.; Italy, 100,000 lbs.; Jamaica, 1,204 lbs.; Mexico, 900 lbs.; Newfoundland, 2,042 lbs.; Norway, 438,202 lbs.; Panama, 10,467 lbs.; Peru, 184 lbs.; Portugal, 68 lbs.; San Domingo, 167 lbs.; Venezuela, 255 lbs.

HAMS AND SHOULDER.—Brazil, 1,979 lbs.; British West Indies, 493 lbs.; Colombia, 803 lbs.; Cuba, 594,225 lbs.; England, 925,393 lbs.; France, 238,746 lbs.; French Guiana, 5,165 lbs.; Guatemala, 703 lbs.; Haiti, 786 lbs.; Jamaica, 2,457 lbs.; Mexico, 9,183 lbs.; Newfoundland, 4,897 lbs.; Nicaragua, 135 lbs.; Panama, 6,244 lbs.; Peru, 600 lbs.; Portugal, 953 lbs.; San Domingo, 5,450 lbs.; Venezuela, 14,023 lbs.

LARD.—Brazil, 1,210 lbs.; British West Africa, 600 lbs.; British West Indies, 6,500 lbs.; Canary Islands, 1,400 lbs.; Chile, 4,725 lbs.; Colombia, 6,807 lbs.; Cuba, 66,210 lbs.; Denmark, 185,467 lbs.; Dutch West Indies, 125 lbs.; Ecuador, 10,361 lbs.; England, 2,514,487 lbs.; France, 3,457,519 lbs.; French Guiana, 6,031 lbs.; Hayti, 4,000 lbs.; Jamaica,

5,578 lbs.; Mexico, 80,682 lbs.; Norway, 102,413 lbs.; Panama, 4,020 lbs.; San Domingo, 13,662 lbs.; Spain, 13,540 lbs.; Spanish Africa, 196,238 lbs.; Venezuela, 1,295 lbs.

LARD COMPOUNDS.—Brazil, 27 lbs.; British West Indies, 9,140 lbs.; Costa Rica, 260 lbs.; Cuba, 52,661 lbs.; England, 60,114 lbs.; Hayti, 900 lbs.; Jamaica, 5,044 lbs.; Mexico, 11,363 lbs.; Newfoundland, 1,759 lbs.; Panama, 5,044 lbs.; Spain, 30 lbs.

LARD OIL.—Australia, 292 gals.; Chile, 88 gals.; Cuba, 51 gals.; England, 8,700 gals.; Italy, 2,500 gals.

FRESH PORK.—Cuba, 3,729 lbs.; England, 523,232 lbs.; Jamaica, 1,600 lbs.; Panama, 9,837 lbs.; San Domingo, 400 lbs.

PICKLED PORK.—British West Indies, 7,700 lbs.; Chile, 3,500 lbs.; Cuba, 13,329 lbs.; England, 30,900 lbs.; France, 30,500 lbs.; French Guiana, 44,350 lbs.; Haiti, 400 lbs.; Jamaica, 15,600 lbs.; Newfoundland, 230,000 lbs.; Norway, 20,000 lbs.; Panama, 23,300 lbs.; San Domingo, 8,400 lbs.

CANNED PORK.—British West Indies, 30 lbs.; Canary Islands, 18 lbs.; England, 5,895 lbs.; France, 17,700 lbs.; Italy, 14,400 lbs.; Mexico, 345 lbs.

SAUSAGE.—Argentina, 72 lbs.; British West Africa, 200 lbs.; British West Indies, 212 lbs.; Canary Islands, 550 lbs.; Chile, 42 lbs.; Costa Roca, 124 lbs.; Cuba, 9,280 lbs.; England, 37,200 lbs.; France, 396,030 lbs.; French Guiana, 678 lbs.; Guatemala, 742 lbs.; Haiti, 463 lbs.; Jamaica, 76 lbs.; Japan, 75 lbs.; Mexico, 465 lbs.; Miquelon Island, 360 lbs.; Newfoundland, 1,265 lbs.; Panama, 5,250 lbs.; Peru, 300 lbs.; Salvador, 174 lbs.; San Domingo, 13,079 lbs.; Spain, 3,000 lbs.; Venezuela, 1,170 lbs.

EXPORTS OF BEEF PRODUCTS.

Exports of beef products from New York reported up to March 7, 1917:

CATTLE.

BEEF, PICKLED AND OTHER CURED.—British West Indies, 4,350 lbs.; Canada, 20,000 lbs.; Colombia, 200 lbs.; Costa Rica, 400 lbs.; Cuba, 400 lbs.; England, 258,233 lbs.; France, 7,500 lbs.; Jamaica, 2,900 lbs.; Newfoundland, 184,000 lbs.; Russia in Europe, 224,092 lbs.; San Domingo, 1,800 lbs.

FRESH BEEF.—British West Indies, 1,105 lbs.; Cuba, 8,018 lbs.; England, 749,231 lbs.; French Guiana, 46,400 lbs.; Newfoundland, 20,312 lbs.; Norway, 25,200 lbs.; Panama, 500 lbs.

OLEOMARGARINE.—Bermuda, 126 lbs.; British West Indies, 2,175 lbs.; Dutch West Indies, 100 lbs.; Jamaica, 7,100 lbs.; Mexico, 351 lbs.; Newfoundland, 400 lbs.; Panama, 3,720 lbs.; San Domingo, 5,220 lbs.

OLEO OIL.—England, 385,535 lbs.; Japan, 140 lbs.; Mexico, 9,977 lbs.; Newfoundland, 38,256 lbs.; Norway, 203,555 lbs.

OLEO STOCK.—France, 22,553 lbs.; Norway, 18,569 lbs.

OLEINE.—Norway, 9,375 lbs.

STEARINE.—Cuba, 20,000 lbs.; Ecuador, 406 lbs.; Denmark, 121,403 lbs.; Dutch West Indies, 35 lbs.; France, 22,364 lbs.; Guatemala, 1,057 lbs.; Honduras, 19,163 lbs.; Japan, 2,000 lbs.; Peru, 17,290 lbs.

NEATSFOOT OIL.—Chile, 600 gals.; England, 2,000 gals.; Norway, 500 gals.

OTHER ANIMAL OILS.—England, 2,500 gals.; Italy, 4,400 gals.

TALLOW.—Chile, 22,300 lbs.; France, 106,710 lbs.; Honduras, 2,798 lbs.; Jamaica, 500 lbs.; Japan, 56,100 lbs.; Newfoundland, 954 lbs.; Peru, 8,181 lbs.

CANNED MEATS (Value).—Australia, \$11; British South Africa, \$70; British West Indies, \$167; Canary Islands, \$5; Colombia, \$82; Costa Rica, \$501; Cuba, \$1,411; Dutch West Indies, \$20; England, \$22,148; France, \$353,927; French Guiana, \$50; French West Indies, \$25; Guatemala, \$159; Haiti, \$27; Honduras, \$114; Italy, \$3,281; Jamaica, \$868; Japan, \$296; Mexico, \$187; Miquelon Island, \$15; Newfoundland, \$3; Nicaragua, \$7; Panama, \$1,016; Peru, \$196; Portugal, \$14; Salvador, \$33; San Domingo, \$348; Scotland, \$2,496; Spain, \$5; Venezuela, \$245.

OTHER MEAT PRODUCTS (Value).—British India, \$46; British West Indies, \$271; Canary Islands, \$6 Costa Rica, \$166; Cuba, \$1,813; Dutch West Indies, \$40; Ecuador, \$18; England, \$22,920; France, \$3,741; French Guiana, \$5,646; Haiti, \$8; Miquelon Island, \$15; Jamaica, \$21; Panama, \$1,266; San Domingo, \$178; Spanish Africa, \$7,036.

GREEN AND SWEET PICKLED MEATS.

(Special Report to the National Provisioner from the Davidson Commission Co.)

Chicago, March 8, 1917.—Quotations on green and sweet pickled meats, f. o. b. Chicago, loose, are as follows:

Regular Hams—Green, 8@10 lbs. ave., 20%e.; 10@12 lbs. ave., 20%e.; 12@14 lbs. ave., 20%e.; 14@16 lbs. ave., 21c.; 16@18 lbs. ave., 21%e.; 18@20 lbs. ave., 21%e.; 20@22 lbs. ave., 21%e.; Sweet pickled, 8@10 lbs. ave., 19%e.; 10@12 lbs. ave., 19%e.; 12@14 lbs. ave., 19%e.; 14@16 lbs. ave., 19%e.; 16@18 lbs. ave., 19%e.; 18@20 lbs. ave., 19%e.; 20@22 lbs. ave., 19%e.

Skinned Hams—Green, 14@16 lbs. ave., 21%e.; 16@18 lbs. ave., 21%e.; 18@20 lbs. ave., 21%e.; 20@22 lbs. ave., 21%e.; 22@24 lbs. ave., 21%e. Sweet pickled, 14@16 lbs. ave., 20%e.; 16@18 lbs. ave., 20%e.; 18@20 lbs. ave., 20%e.; 20@22 lbs. ave., 20%e.; 22@24 lbs. ave., 20%e.

Picnic Hams—Green, 4@6 lbs. ave., 16c.; 6@8 lbs. ave., 15%e.; 8@10 lbs. ave., 15%e.; 10@12 lbs. ave., 15%e. Sweet pickled, 4@6 lbs. ave., 15%e.; 6@8 lbs. ave., 15%e.; 8@10 lbs. ave., 15%e.; 10@12 lbs. ave., 15%e.

Clear Bellies—Green, 6@8 lbs. ave., 24c.; 8@10 lbs. ave., 23c.; 10@12 lbs. ave., 22c.; 12@14 lbs. ave., 21c.; 14@16 lbs. ave., 20%e. Sweet pickled, 6@8 lbs. ave., 22c.; 8@10 lbs. ave., 21%e.; 10@12 lbs. ave., 21%e.; 12@14 lbs. ave., 20%e.

EXPORTS OF PROVISIONS

Exports of hog products for the week ending March 3, 1917, with comparisons:

PORK, BBLS.

To—	Week ending Mar. 3, 1917.	From Nov. 1, 1916, to Mar. 4, 1917.
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United Kingdom ..	32	550
Continent	70
So. & Cen. Am.	242	192
West Indies	857	1,389
Br. No. Am. Col.	40
Other countries... ..	.....	264

Total	1,491	2,241
MEATS, LBS.		

United Kingdom ..	25,934,600	9,940,350	211,417,750
Continent	1,916,549	886,525	94,451,974
So. & Cen. Am.	53,511	142,475	846,051
West Indies	109,864	181,644	3,557,732
Br. No. Am. Col.	3,250	232,185
Other countries... ..	29,248	5,639	337,098

Total	28,045,772	11,159,903	310,543,690
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LARD, LBS.

United Kingdom ..	5,360,370	5,997,278	55,967,636
Continent	41,300	1,958,514	91,097,293
So. & Cen. Am.	1,012,137	505,504	11,112,569
West Indies	595,899	521,156	12,123,597
Br. No. Am. Col.	30,406	97,993
Other countries... ..	43,330	7,980	495,697

Total	7,053,036	9,020,838	167,704,685
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RECAPITULATION OF THE WEEK'S EXPORTS.

From—	Pork, bbls.	Meats, lbs.	Lard, lbs.
New York	1,116	9,771,772	5,618,036
Philadelphia .....	.....	203,000	.....
New Orleans	375	.....	1,435,000
Portland, Me. ....	.....	*18,071,000	.....

Total week	1,491	28,045,772	7,053,036
Previous week	1,065	9,062,874	8,064,569
Two weeks ago...	593	4,878,469	5,626,877
Cor. week last yr'	2,941	11,159,903	9,020,838

*NOTE.—Delayed report (owing to Government orders) from Jan. 1 to Feb. 1 inclusive.

COMPARATIVE SUMMARY OF EXPORTS.

From Nov. 1, '16, Same time	to Mar. 3, '17, last year	Changes.
Pork, lbs....	5,692,400	9,335,000
Meats, lbs....	310,843,690	298,956,400
Lard, lbs....	167,704,685	179,610,117
		Dec. 11,905,462

TALLOW, STEARINE, GREASE and SOAP

WEEKLY REVIEW

TALLOW.—The market has advanced again during the week and one of the big consumers purchased close to 750,000 pounds of tallow on the basis of 12½c. Further business was anticipated and it was admitted that the market had again been fairly well cleaned up of surplus offerings. The great strength in outside markets, particularly provisions, continued the dominating influence in tallow, while the advances in competing stiffs, such as cotton oils, corn oil and soya bean oil, were other factors. The sharp advance in the grain list, with corn making new high levels, were not overlooked.

The glycerine market continues firm and it is rumored in some quarters that one of the big sellers has disposed of more than can be comfortably supplied. The theory was that this interest was buying greases and oils for the purpose of obtaining sufficient glycerine to fill contracts. Abroad all markets were firm or strong in response to advances on this side and the great difficulties in importing at English, French and Italian ports. At London the last auction sale resulted in offerings of 508 casks, of which 462 were absorbed at prices less higher than those of the previous week.

Prime city tallow in the local market was quoted at 11½@12c. nominal and city specials at 12½c. bid loose.

OLEOSTEARINE.—The market has been firmer. The buying for compound lard interests has advanced the list to 13¾@14c. Prime city tallow is quoted at 11½c. and city specials at 12½c. bid.

OLEO OIL.—The market was again very firm, with the general advance in other oils. Offerings continue very light. Extras are quoted at 20½@21c. nom., and medium at 19@20c. nom.

SEE PAGE 29 FOR LATER MARKETS.

CORN OIL.—Prices show further advance. Demand is maintained and distribution appears to be maintained. Prices at 12@12½c.

PALM OIL.—The market was firm but quiet. Offerings from abroad are light and the market shows maintained strength. Prime red, spot, 13½@14c.; Lagos, spot, 14@15c.; to arrive, —; palm kernel, 16c.

PEANUT OIL.—Prices have continued very firm at the full prices previously quoted. Prices are quoted at \$1.05@1.10.

SOYA BEAN OIL.—The market has been very firm with spot oil commanding a

sharp premium. Spot is quoted at 12½@13½c. nom.

NEATSFOOT OIL.—Prices are firm with other oils. Prices are quoted 20 cold test, \$1.20@1.30; 30, \$1.15@1.20, and prime, \$1.00@1.10.

COCOANUT OIL.—The supplies available continue very light. Demand is persistent and arrivals are quickly absorbed. Ceylon, 15@15¼c.; Cochin, 17@20.

GREASE.—The strength of competing fats continues to affect the market. Demand is good and prices are firm at new high levels. Yellow, 11½@11¾c. nom.; bone, 11½@11¾c. nom.; house, 11½@11¾c.

FRESH MEAT AND OFFAL IMPORTS.

Imports of foreign beef into port of New York during the past week totaled nothing, compared to nothing last week, and nothing two weeks ago. Imports included 300 bbls. jerked beef, 639 casks tallow, 150 casks casings and 435 bags dried blood.

ARGENTINE BEEF EXPORTS.

Cable reports of Argentine exports of beef for the week up to March 9, 1917, show that exports from that country were as follows: To England, 52,500 quarters; to the Continent, 16,519 quarters; to the United States, none. The previous week's exports were as follows: To England, 31,480 quarters; to the Continent, 19,168 quarters; to the United States, none.

IMPORTS OF FRESH BEEF.

For the week ending March 3, 1917, the Government reports imports of fresh beef at the port of New York amounting to — pounds, the average value, according to estimates from the manifests, being — cents per pound. The previous week's imports totaled — pounds, and averaged — cents per pound.

OCEAN FREIGHTS.

[Subject to change. Quotations given are shillings per ton and cents per 100 lbs.]

	Liver	Glas-	Rotter-	Copen-
	pool	gow	dam	hagen
Beef, tierces	\$1.00	\$4.00	300c.	300c.
Pork, barrels	4.00	4.00	300c.	300c.
Bacon	4.00	4.00	300c.	300c.
Canned meats	4.00	4.00	300c.	300c.
Lard, tierces	4.00	4.00	300c.	305c.
Tallow	4.00	4.00	300c.	300c.
Cottonseed oil	4.00	....	300c.	300c.
Oil Cake	4.00	....	200c.	185c.
Butter	4.00	4.00	350c.	300c.
No rates to Hamburg.				

PORK CUTS IN NEW YORK.

(Special Report to The National Provisioner from H. C. Zaun.)

New York, March 7, 1917.—Wholesale prices on green and sweet pickled pork cuts in New York City are reported as follows: Pork loins, 25c.; green hams, 8@10 lbs. ave., 24c.; 10@12 lbs. ave., 23c.; 12@14 lbs. ave., 22½c.; 18@20 lbs. ave., 21c.; green clear bellies, 6@10 lbs. ave., 23c.; 10@12 lbs. ave., 23c.; 12@14 lbs. ave., 23c.; green rib bellies, 10@12 lbs. ave., 22c.; 12@14 lbs. ave., 22c.; S. P. clear bellies, 6@8 lbs. ave., 20c.; 8@10 lbs. ave., 21c.; 10@12 lbs. ave., 21c.; 12@14 lbs. ave., 20c.; S. P. rib bellies, 10@12 lbs. ave., 20c.; 12@14 lbs. ave., 20c.; S. P. hams, 8@10 lbs. ave., 20c.; 10@12 lbs. ave., 20c.; 18@20 lbs. ave., 21c.; city steam lard, 19½c.; city dressed hogs, 18¾c.

Western prices on green cuts are as follows: Pork loins, 8@10 lbs. ave., 21c.; 10@12 lbs. ave., 20c.; 12@14 lbs. ave., 19c.; 14@16 lbs. ave., 18c.; skinned shoulders, 17½c.; boneless butts, 21c.; Boston butts, 18c.; spareribs, 15c.; neck ribs, 6c.; lean trimmings, 19c.; regular trimmings, 17c.; kidneys, 7c.; tails, 8c.; livers, 7c.; snouts, 7½c.; pig tongues, 16½@17c.

CHEMICALS AND SOAP SUPPLIES.

(Special Report to The National Provisioner.)

New York, March 8.—Quotations on chemicals and soapmakers' supplies, are as follows: 74@76 per cent. caustic soda, 4½@4½c. per lb. 60 per cent. caustic soda, 4½c. per lb.; 98 per cent. powdered caustic soda, 4½@4½c. per lb.; 48 per cent. bicarbonate of soda, 3c. per lb.; talc, 1½@1¾c. per lb.; 58 per cent. soda ash, 3@3¼c. per lb.; chloride of lime in bbls., 5½@6c. per lb.; chloride of lime in casks, — per lb.; silex, 2,000 lbs., \$15@20 per ton.

Prime palm oil, 13½c. per lb.; clarified palm oil, 15c. per lb.; genuine Lagos palm oil in casks, 14c. per lb.; palm kernel oil, 16@17c. per lb.; yellow olive oil, \$1.45@1.50 per gal.; green olive oil, \$1.40 per gal.; Ceylon cocoanut oil, 15@15½c. per lb.; Cochin cocoanut oil, 19@20c. per lb.; green olive oil foots, 12½@13c. per lb.; cottonseed oil, \$1.05 per gal.; soya bean oil, 13@13½c. per lb.; corn oil, — per lb.; peanut oil, soapmakers, 5 per cent. acidity, \$1.15 per gal.

Prime city special tallow, 12½c. per lb.; brown grease, — per lb.; yellow packers' grease, 11@11½c. per lb.; dynamite glycerine, 51@55c. per lb.; saponified glycerine, 43c. per lb.; crude soap lye glycerine, 41c. per lb.; chemically pure glycerine, 55c. per lb.

WELCH, HOLME & CLARK CO.

Office and Warehouse

383 West Street

New York City

CAUSTIC SODA
COCOANUT OIL
TALLOW

GREASE
STEARINE

SODA ASH

PALM OIL

COTTONSEED OIL EXPORTS

Exports of cottonseed oil reported for the week ending March 8, 1917, and for the period since September 1, 1916, were:

	Week ending Mar. 8, 1917.	Since Sept. 1, 1916.	Week ending Mar. 8, 1917.	Since Sept. 1, 1916.	Same period, 1915.
From New York—					
Africa	14	992	2,384	103,022	230,993
Argentina	—	1,302	—	16,608	65,944
Australia	—	173	—	—	2,174
Bolivia	—	44	—	—	980
Brazil	—	722	—	—	327
British Guiana	25	241	—	—	3,580
Central America	43	507	—	—	—
Chile	—	1,151	—	—	—
Cuba	498	8,294	—	—	—
Denmark	—	5,464	—	—	—
Dutch Guiana	77	696	—	—	—
Ecuador	—	16	—	—	—
England	—	3,356	—	—	—
France	—	2,815	—	—	—
French Guiana	—	508	—	—	—
Haiti	—	101	—	—	—
Italy	—	700	—	—	—
Mexico	—	322	—	—	—
Netherlands	—	39,412	—	—	—
Newfoundland	—	475	—	—	—
Norway	250	11,265	—	—	—
Panama	10	1,314	—	—	—
Peru	—	2	—	—	—
San Domingo	—	1,391	—	—	—
Scotland	—	550	—	—	—
South America	—	1,495	—	—	—
Sweden	—	11,100	—	—	—
Turkey in Asia	—	96	—	—	—
Uruguay	—	1,109	—	—	—
Various	1,000	1,775	—	—	—
Venezuela	—	17	—	—	—
West Indies, other	467	5,617	—	—	—
Total	—	2,384	103,022	—	—
From New Orleans—					
Cuba	—	1,454	—	—	—
Mexico	—	1,035	—	—	—
Norway	—	13,350	—	—	—
Panama	—	760	—	—	—
West Indies	—	9	—	—	—
Total	—	—	16,608	—	—
From Philadelphia—					
Argentina	—	47	—	—	—
Netherlands	—	5,847	—	—	—
Scotland	—	442	—	—	—
Total	—	—	6,336	—	—
From Savannah—					
Netherlands	—	—	1,648	—	—
Total	—	—	1,648	—	—
From Michigan—					
Canada	—	—	21,103	—	—
Total	—	—	21,103	—	—
From Buffalo—					
Canada	—	—	477	—	—
Total	—	—	477	—	—
From St. Lawrence—					
Canada	—	—	647	—	—
Total	—	—	647	—	—
From Dakota—					
Canada	—	—	1,709	—	—
Total	—	—	1,709	—	—
From Vermont—					
Canada	—	—	9	—	—
Total	—	—	9	—	—
From other ports—					
Mexico	—	—	9	—	—
Total	—	—	9	—	—

THE NATIONAL PROVISIONER.

Recapitulation—	Week ending Mar. 8, 1917.	Since Sept. 1, 1916.	Same period, 1915.
From New York	2,384	103,022	230,993
From New Orleans	—	16,608	65,944
From Galveston	—	—	2,174
From Baltimore	—	—	980
From Philadelphia	—	6,336	327
From Savannah	—	1,648	3,580
From Norfolk and Newport News	—	—	4,698
From Boston	—	—	2
From San Francisco	—	—	221
From Mobile	—	—	3,440
From Detroit	—	21,103	38,092
From Buffalo	—	477	7,870
From St. Lawrence	—	647	4,096
From Dakota	—	1,709	3,872
From Vermont	—	9	28
From other ports	—	9	3
Total	2,384	151,568	366,320

SOUTHERN MARKETS

Atlanta.

(Special Wire to The National Provisioner.)

Atlanta, Ga., March 8, 1917.—Crude cottonseed oil, 88c. bid. Prime 7 per cent. meal, \$34@35, f. o. b. mills. Hulls, \$16.50@17, f. o. b. mills, loose.

Columbia.

(Special Wire to The National Provisioner.)

Columbia, S. C., March 9, 1917.—Crude cottonseed oil sold at 90c.; mills now have small stocks unsold. Meal, \$36. Hull, \$17 per ton, f. o. b. mills.

Memphis.

(Special Wire to The National Provisioner.)

Memphis, Tenn., March 8, 1917.—Prime crude cottonseed oil, 88c. Prime 7½ per cent. meal, \$36@36.50. Prime hulls, \$16.50@17, loose; \$18.50@19, sacked.

New Orleans.

(Special Wire to The National Provisioner.)

New Orleans, La., March 8, 1917.—Prime crude cottonseed oil, after selling at 90c., is now offered at 88c. for Texas, with 87c. bid. Majority of mills are expecting crude oil to sell much higher. Prime meal, 8 per cent., \$40; 7½ per cent. meal, \$38; 7 per cent. meal, \$35.50; all sort ton, New Orleans. Loose hulls, \$17.25; sacked hulls, \$20 here.

Dallas.

(Special Wire to The National Provisioner.)

Dallas, Texas, March 8, 1917.—Cottonseed oil market firm. Prime crude, 88c. bid., 90c. asked. Prime summer yellow, 92c. bid. No quotations on prime cake at Galveston.

COTTONSEED OIL SITUATION.

(Special Letter to The National Provisioner from Aspegren & Co.)

New York, March 8, 1917.—The market during the past week was extremely active. Fluctuations were influenced principally by the actions of the lard market. From the closing prices of February 28, May lard, which was then quoted at \$18.45 advanced to \$19.52½, the high being scored on March 5. The cotton oil market followed this advance almost point for point. From the high price for May lard the market broke to \$18.75 today. The cotton oil market during this period scored an extreme decline of 73 points. This was in the March delivery. The balance of the list only scored de-

clines of 42 to 60 points. The buying of the past week was principally for Western accounts. The selling was principally for refining interests.

The crude oil markets were extremely active, but as has been the case lately sellers were more anxious than the buyers, and the difference between the price of crude oil and refined oil widened out still further. On February 28 Southeast crude oil was quoted at \$11.20. The high price scored during the week was only \$12.

The consuming trade all during the week has been extremely slow. Considering the heavy advance in the lard market, also the prevailing heavy discount of compound lard and cotton oil, it is rather surprising that the demand is so slow for the cheaper articles.

The census report as to the stocks of cotton seed and oil on hand as of February 1, as being 67 per cent. of the total crush, clearly shows that the demand for cotton oil to date has been extremely slow. Cheaper competing foreign and domestic oils from all indications are displacing American cotton oil.

At the close of the week the undertone to the market looks weak. Comparing the character of buyers to the sellers, the market is not in a healthy position, and unless the consuming trade can be induced to buy in heavier volume recent buyers are likely to experience considerable difficulty in disposing of the purchases.

Close Feb. 28. Bid.	Asked.	High.	Low.	Bid.	Asked.
\$12.96	\$12.99	\$13.93	\$12.00	\$13.28	\$13.39
May	12.87	12.88	13.84	13.32	13.33
July	12.86	12.87	13.81	12.82	13.34
Aug.	12.86	12.87	13.80	12.81	13.35
Sept.	12.86	13.87	13.77	12.84	13.36
Oct.	12.20	12.35	13.20	12.40	12.76

EXPORTS OF DAIRY PRODUCTS.

Exports of dairy products from New York reported to The National Provisioner up to March 7, 1917:

BUTTER.—Brazil, 185 lbs.; British Honduras, 90 lbs.; British West Africa, 760 lbs.; British West Indies, 1,605 lbs.; Colombia, 200 lbs.; Costa Rica, 764 lbs.; Cuba, 7,060 lbs.; Dutch West Indies, 64 lbs.; French Guiana, 8,973 lbs.; Haiti, 2,197 lbs.; Jamaica, 5,637 lbs.; Mexico, 4,444 lbs.; Newfoundland, 13,615 lbs.; Panama, 6,416 lbs.; Peru, 2,000 lbs.; San Domingo, 1,735 lbs.; Venezuela, 408 lbs.

EGGS.—British West Indies, 30 dz.; Newfoundland, 150 dz.

CHEESE.—Argentina, 1,335 lbs.; Brazil, 90 lbs.; British West Indies, 759 lbs.; Colombia, 487 lbs.; Cuba, 19,766 lbs.; England, 619,705 lbs.; French Guiana, 1,498 lbs.; Guatemala, 44 lbs.; Haiti, 759 lbs.; Jamaica, 3,266 lbs.; Mexico, 331 lbs.; Miquelon Island, 136 lbs.; Newfoundland, 2,513 lbs.; Panama, 3,610 lbs.; San Domingo, 2,957 lbs.; Venezuela, 401 lbs.

FOREIGN COMMERCIAL EXCHANGE.

New York, March 8.—Foreign commercial exchange rates, as far as quoted, are:

London—	Bankers' 60 days.....	4.71½
	Cable transfers	4.76¾
	Demand sterling	4.75¼
	Commercial bills, sight	4.75
	Commercial, 60 days.....	4.70¾
	Commercial, 90 days.....	4.68½
Paris—	Commercial, 90 days.....	No quotations.
	Commercial, 60 days.....	5.90%
	Commercial, sight	5.86
	Bankers' cables	5.84½
	Bankers' checks	5.85%
Berlin—	Commercial, sight	No quotations.
	Bankers' sight	68%
	Bankers' cables	68½
Antwerp—	Commercial, 60 days.....	No quotations.
	Bankers' sight	No quotations.
	Bankers' cables	No quotations.
Amsterdam—	Commercial, sight	40½
	Commercial, 60 days.....	40%
	Bankers' sight	40%
Copenhagen—	Checks	28.80

COTTONSEED OIL

WEEKLY REVIEW

THE NATIONAL PROVISIONER is official Organ of the Interstate Cottonseed Crushers' Association, the Texas Cottonseed Crushers' Association, South Carolina Cottonseed Crushers' Association, the Georgia Cottonseed Crushers' Association, and the Mississippi Cottonseed Crushers' Association.

Crude Oil at 90c—Highest Prices in the History of the Trade—Lard Reacts After Big Advances—Oil Contracts Sympathetically Affected—Sentiment More Mixed at the High Basis—New Crop Outlook.

Crude oil at various southern points sold at 90 cents a gallon the past week. The price represented the highest in the history of the trade. Contracts on the New York Produce Exchange also advanced decidedly in price to the highest levels recorded. At the bottom of the advance were the spectacular upturns in the lard market, although subsequently there were reactions in this product which were shared by the cotton oil list.

The speculative trade was of liberal volume. Some substantial profits have been gathered by western and local interests. The south did not trade freely, although those having crude oil held tenaciously for the high prices. A feature of the trade was the failure of the crude oil market to respond in full to the big advance in the contract list, which resulted in a differential in crude oil and cotton contracts of more than 180 points at one time.

A normal differential would be 120 points. There has often been buying of crude oil and selling of contracts here as a temporary

hedge for refiners at about 100 points difference. With cotton oil prices so high, however, more money is needed in the swinging of trades and the risks are altogether greater, while with tank cars scarce and held at a very high rental, a larger margin is required. Just what this is, depends upon circumstances, such as tank car facilities and location of oil at the south; also activity at refining centers. But with all considered the view is held that a differential of about 150 points, possibly a little higher, while tank cars are hard to get, would be fair.

The tenders on March contracts so far have been about 14,000 barrels. These notices have been well absorbed and have not really been a factor in the market, although of course, if the notices had not been so free the shorts in the March delivery would have been the more uncomfortable. As it was, nearly all items, including the political situation, were overshadowed by the excitement and strength in the lard market.

For a time the consuming demand for oil was brisk, but as spot oil advanced to higher than 13½ cents at New York the buying dropped off, suggesting greater conservatism among consumers. Compound lard prices were advanced to a level of 14% to 15 cents as compared to nearly 20 cents for refined lard. It is the discount of compound lard as compared with animal lard that should really receive more consideration than the discount of cotton oil as compared with the western lard market.

Just now the assumption in bullish quarters is that the compound lard trade should be heavy at its discount and that this alone should warrant higher prices for cotton oil

The fact that exports have been at a new low record for the present decade and that some of the imports and substitutions for cotton oil, particularly soya bean and peanut, have been at a new high record were lost sight of or little referred to.

As a matter of fact there are people who are bullish on cotton oil just now who admit that with the larger crush of cotton oil this year and other supply and demand factors considered there will be enough oil to go around, but they prefer to follow sentiment, which in the past has been of a nature to bring in higher prices for cotton oil along with the demonstrations in lard.

The new crop oil situation will soon come in for more respect. Higher prices for grains, particularly corn, and deficient moisture in the cotton belt, especially Texas, where the first run of new oil comes from, are apt to keep down the increase of cotton acreage. Rains in the central and eastern cotton states which were excessive recently have let up and work in the cotton fields is progressing.

Closing prices, Saturday, March 3, 1917.—Spot, \$13.55; March, \$13.55@13.62; April, \$13.46@13.50; May, \$13.51@13.54; June, \$13.50@13.52; July, \$13.53@13.54; August, \$13.54@13.55; September, \$13.52@13.54; October, \$13.00@13.01. Sales were: March, 1,100, \$13.53@13.30; April, 2,100, \$13.48@13.44; May, 9,200, \$13.52@13.43; July, 12,100, \$13.55@13.43; August, 4,700, \$13.55@13.46; September, 2,300, \$13.53@13.44; October, 1,900, \$13.03@12.95. Total sales, 33,400 bbls. Prime crude, S. E., \$11.60 nom.

Closing prices, Monday, March 5, 1917.—Spot, \$13.60; March, \$13.57@13.58; April,

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Chicago, 1893.
San Francisco, 1894.
Atlanta, 1895.
Paris, 1900. Buffalo, 1901.
Charleston, S. C., 1902.
St. Louis, 1904.

\$13.50@13.57; May, \$13.56@13.58; June, \$13.52@13.56; July, \$13.55@13.57; August, \$13.56@13.59; September, \$13.55@13.59; October, \$13.01@13.05. Sales were: Prime crude, S. E., \$12.00 nom.; March, 4,900, \$13.93@13.51; April, 100, \$13.75@13.75; May, 24,300, \$13.84@13.50; June, 200, \$13.52@13.52; July, 22,500, \$13.82@13.49; August, 8,400, \$13.80@13.58; September, 7,400, \$13.77@13.50; October, 2,600, \$13.20@12.95. Total sales, 70,400 bbls.

Closing prices, Tuesday, March 6, 1917.—Spot, \$13.50, March, \$13.53@13.60; April, \$13.54@13.57; May, \$13.56@13.57; June, \$13.54@13.57; July, \$13.56@13.57; August, \$13.56@13.57; September, \$13.55@13.56; October, \$13.00@13.05. Sales were: Prime crude, S. E., \$12.00 nom.; March, 400, \$13.50@13.50; April, 1,100, \$13.62@13.55; May, 11,000, \$13.71@13.56; July, 11,500, \$13.70@13.55; August, 5,400, \$13.70@13.57; September, 1,400, \$13.62@13.55; October, 1,200, \$13.07@13.00. Total sales, 32,000 bbls.

Closing prices, Wednesday, March 7, 1917.—Spot, \$13.20; March, \$13.28@13.30; April, \$13.30@13.36; May, \$13.32@13.33; June, \$13.32@13.34; July, \$13.34@13.35; August, \$13.35@13.37; September, \$13.36@13.38; October, \$12.76@12.78. Sales were: Prime crude, S. E., \$12.00 nom.; March, 500, \$13.40@13.20; May, 9,700, \$13.46@13.30; June, 100, \$13.35@13.35; July, 8,400, \$13.42@13.21; August, 5,000, \$13.41@13.35; September, 4,700, \$13.42@13.35; October, 1,700, \$12.78@12.70. Total sales, 30,100 bbls.

Closing prices, Thursday, March 8, 1917.—Spot, \$13.35; March, \$13.41@13.45; April, \$13.43@13.45; May, \$13.48@13.49; June, \$13.47@13.50; July, \$13.49@13.50; August, \$13.49@13.50; September, \$13.48@13.50; October, \$12.86@12.90. Sales were: Prime crude, S. E., \$11.73 sales; March, 200, \$13.40@13.40; April, 100, \$13.44@13.44; May, 9,000, \$13.52@13.37; July, 5,300, \$13.51@13.40; August, 5,300, \$13.52@13.40; September, 1,800, \$13.49@13.37; October, 400, \$12.91@12.82. Total sales, 22,100.

SEE PAGE 29 FOR LATER MARKETS.

POOR SEED MAKES POOR OIL.

Cotton Oil Mills Must Inspect Seed Carefully Before Purchasing.

(Special Letter to The National Provisioner from The Picard-Law Company.)

Atlanta, Ga., March 6, 1917.—The comparative standard figures on meal and hulls for the month of February are as follows:

	Meal. Standard.	Hulls. Standard.
1912.....	1.00	2.20
1913.....	1.01	1.90
1914.....	0.95	1.83
1915.....	0.93	1.78
1916.....	0.87	1.22
1917.....	0.91	1.62

While the average standard is slightly higher than last season, the work is about the same, when we consider the deficiency of ammonia in seed and the consequent lower production of meal per ton. The yield of oil should be better as the same amount is left in cake and the average seed show higher oil content.

We have received seed samples from only 26 mills during the past month, and that cannot be considered as representative. In general, however, we warn the mills against purchasing seed without careful inspection. The seed which have been held in storage since early in the season have in most instances gone through a heat which will cause an off-flavored oil. Seed garnered during the last two months are faulty, and will give very poor yields. If seed garnered in October and November can be obtained, the purchaser is reasonably safe. Crude oil in storage should now be watched very carefully.

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RESULTS PROVE EARLY PLANTING A FAILURE

Boll Weevil Specialist Quotes Figures to Prove His Case

By J. W. Vogler, Atlanta, Georgia.

If the early planting of cotton was the proper remedy to eradicate or even to reduce the ravages from the boll weevil, is it not reasonable to suppose that that method of planting, especially in view of the strenuous advocacy on the part of our experts, and the faithful application of it on the part of the cotton planters during the last twenty-five years, should have at least reduced, if not eradicated, the damage to the cotton industry caused by that pest?

The loss of cotton caused by the boll weevil during the last two years is estimated to be about \$300,000,000, while the damage up to and including the year 1914 in the various states is estimated as follows: Alabama \$38,889,900, Arkansas \$35,219,950, Louisiana \$304,552,500, Mississippi \$93,283,650, Oklahoma \$11,746,700, Texas \$1,029,374,500, making a total loss up to date of \$1,813,067,200.

This tremendous damage to the cotton industry over the entire cotton belt by itself should convince every thinking man that early planting, the only method the U. S. Department of Agriculture has so far advocated to bring relief to the cotton industry from the boll weevil, is not a success but a positive failure.

In order to prove that this damage is not due to any other cause, but to early planting, I refer to the fact, borne out by census bureau reports, that the damage from the boll weevil is invariably greater in the southern part of the cotton belt, where early planting is possible, than in the northern part of it, where climatic conditions prevent early planting.

Take Louisiana for instance. The 21 Parishes lying south of the 31st degree of latitude produced in 1904, 389,791 bales of cotton or 35.4% of Louisiana's total crop for that year, while in 1912 their production was reduced to 53,263 bales or 14.2% of

Louisiana's crop for that year. In 11 of these 21 Parishes early planting wiped out the cotton growing industry altogether, while in the remaining 10 their crop of 1904 of 239,365 bales was reduced to 17,564 bales or 7.34% of what they produced in 1904. While the cotton crop in the 14 Parishes north of the 32nd degree, which produced in 1904, 32% of Louisiana's crop increased their proportion of Louisiana's total crop in 1912 to 51.9%.

In Mississippi early planting reduced the cotton crop of the 28 counties lying south of the 32nd degree from 324,262 bales in 1906 to 50,060 bales or 15.44% in 1913, while the proportion of the crop in the 21 counties in Mississippi lying north of the 33rd degree of latitude was increased from 38% in 1906 to 55.5% in 1913.

In Accord With the Laws of Nature.

All these results are not only incontrovertible, but so perfectly in accord with the laws of Nature referring to the emergence and propagation of the boll weevil as laid down by our entomologists, that no other results can be expected from early planting in Georgia.

As a consequence no man should be in the least surprised when he is confronted within a year or two, provided early planting is not stopped, with the fact that the growing of all cotton in the 9 counties of Georgia lying South of the 31st degree, where in 1914, 89,978 bales at 15 cents per pound representing a value of \$6,748,350 were produced, is a thing of the past, and that in the 32 counties lying South of the 32nd degree of latitude, where in 1914 547,298 bales of cotton valued at 15 cents per pound, \$41,047,350 were marketed only about 25 per cent on 136,824 bales valued at 15 cents \$10,261,800 can be produced, resulting in a loss of cotton of \$30,785,550 per annum as long as

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early planting will be permitted to be advocated and practiced there.

My 25 years experience with the growing of cotton under boll weevil conditions in Texas and Louisiana has thoroughly convinced me that if the planting of cotton could be done all over the cotton belt as early as our experts advise, that it should and can be done South of the 31st degree of latitude, the entire cotton industry of the United States would be as surely wiped out altogether as that method of planting has and is bound to wipe it out in the most southern part of the cotton belt, provided the cotton could produce squares there as early as south of the 31st degree of latitude.

Fortunately climatic conditions prevent not only the early planting itself, but also, even if planting is done early, the early formation of squares in every latitude north of the 31st degree. As a consequence the damage from the boll weevil is reduced almost in the same measure as the location of the planting is distant from the 31st degree. It is not the time when the seed is put in the ground that governs the keeping alive and the propagation of the boll weevil, but absolutely and only the time when squares are produced on the cotton that increases or decreases the number of weevils, and consequently also the damage to cotton from that insect.

When the Damage is Actually Done.

All the damage to cotton, for instance, that has been done in the past and will be done in the future has been and will be caused by weevils emerging in accordance with the four emergency tests the Department of Agriculture has on record, the average of which is about as follows: 14 per cent in March, 22 per cent in April, 59 per cent in May and 5 per cent in June. Bear in mind that it takes cotton six weeks to put on squares and that the boll weevil cannot do

any damage until he has squares, that are absolutely necessary to sexually enable him to propagate; also that the most exhaustive test on the longevity of the weevil on record, as contained on page 214 of Circular No. 31 published by the State Crop Pest Commission of Louisiana, proves conclusively that the average life of a boll weevil after leaving hibernation is but 10 7-10 days, it is quite evident that cotton planted on and after May 1st cannot offer any subsistence to any of the weevils emerging in May, because all of them will be dead by June 11th.

Furthermore, as weevils emerging in June in accordance with the same authority, live but seven days after emergence, only a part of the five per cent could be left to damage the cotton. Even if the entire five per cent should manage to make connection with squares, it would be almost impossible for them to propagate into a greater number up to September 15th than 233,824.

Now let us contrast with this statement the propagation of weevils with early, say March 15th, planting. Cotton planted on that day is almost certain to produce squares on May 1st. Are you not therefore keeping alive not only the entire percentage of weevils emerging in May, but also those emerging in June, all of which conservatively estimated in accordance with the observations of the life habits of the weevils as published by our entomologists are bound to propagate, provided cotton will produce that many squares, up to September 15th into 107,060,531 weevils?

Is this statement and comparison not convincing enough to show why early planting always was and almost must be a failure?

Proving It by the Figures.

In practically comparing the propagation of weevils as laid down by our experts with the possible production of squares under

early and late planting conditions we find, that

COTTON PLANTED

To—	In March	
	Squares per acre.	Number of weevils.
May 15	30,000	1,099
June 15	180,000	29,803
July 1	360,000	147,504
July 9	420,000	420,000
July 15	480,000	701,500
August 1	600,000	1,725,393
August 15	720,000	9,865,757
September 15	900,000	107,060,531

Produces:

	On May 15	
	Squares per acre.	Number of weevils.
May 15	.....	.....
June 15	.....	575
July 1	60,000	575
July 9	.....	.....
July 15	120,000	1,592
August 1	180,000	2,677
August 15	450,000	52,053
September 15	900,000	233,824

In making a thorough analysis of this statement, I propose to show by it:

First: That late planted cotton produces exactly as many squares to September 15th as early planted cotton.

Second: That early planted cotton produces 107,060,531 weevils to September 15th.

Third: That late planted cotton produces only 233,824 weevils to the same date.

Fourth: That the difference between the number of weevils produced by early planting and the number produced by late planting is 106,776,707 in favor of late planting and that the early planting therefore is responsible for the destruction of about 1,067,767 pounds of seed cotton, which could have produced: 711 bales of cotton at 15 cents worth \$3,325 and 356 tons of cotton seed at \$60 per ton, \$21,360, or a total of \$74,685.

Fifth: That early planting is bound to produce as many weevils as it can ever produce squares up to about July 9th, which shows also that all the cotton that ever can be produced with early planting must be made by that date or else it cannot be made at all. To explain this statement, I beg to call attention to the fact, also shown in the statement, that cotton previous to about July 9th produces more squares than weevils. For this reason some of the older squares on each stalk as a rule escape being punctured, bloom and form bolls and are therefore immune from the weevils as long as they find an ample supply of fresh squares either in the same or in an adjoining field. Under favorable weather conditions to cotton, which enables the rapid formation of fresh squares these first bolls will produce cotton, but with unfavorable weather to cotton, which at the same time is favorable to the propagation of weevils, only a few of the early bolls escape puncture. This description offers the only excuse the experts ever had and ever will have for their advice to plant early and get ahead of the weevil. Early planting, therefore, can at best be but partially successful, and even that only under the very best weather conditions for cotton.

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CINCINNATI, OHIO, U.S.A.

March 10, 1917

Sixth: By far the most important feature between early and late planting, however, consists in the fact that late planted cotton, outside of the fewer weevils, has about twice the time to produce cotton than early planted can ever hope to have. Early planted cotton rarely ever begins to grow rapidly until warm weather sets in, which is about on June 1st. For this reason and the fact that no cotton can be produced after July 9th, early planted cotton has but 39 days to make, while late planted cotton, which is fully as far advanced by July 1st as the early planted cotton is on June 1st, has 75 days to put on a crop, almost unhampered from the boll weevil up to September 15th, when cotton planted between May 1st and 15th is as a rule as well matured as that planted earlier.

You Never Can Convert a Government Expert

These and many similar arguments have for years been presented to the U. S. Department of Agriculture by myself and

others, with a view of obtaining relief from the boll weevil, but I am sorry to say, so far without any consideration at the hands of the Secretary or the Assistant Secretary of Agriculture.

The reason for this lack of attention on their part is easily explained by the fact that almost all of our petitions and arguments were turned over and answered, or rather acknowledged, by either one or the other of the two originators of early planting, who have so far been unable to refute any of our arguments presented to them.

Instead of fighting the boll weevil on a scientific basis, these two employees of the Department have evidently decided in order to uphold their own reputation as scientists to fight late planting rather than admit that the early planting as a remedy to reduce boll weevil damage is as unscientific and

illogical as to try and put out a fire by pouring coal oil on it.

In submitting this matter for the earnest consideration of every man who is interested in the cotton industry and has its welfare at heart, I beg to say in conclusion that I have outside of the few arguments presented herein so many more practical and scientific proofs in support of uniformly and universally late planting at my command, covering every imaginable phase connected with the problem of growing cotton under boll weevil conditions, that it will afford me pleasure to present and discuss them before any body of cotton planters or business men that may be desirous of getting better acquainted with the best and only method to produce cotton under boll weevil conditions.

MEAT SITUATION IN THE UNITED STATES.

(Continued from page 16.)
dressed weight, is nearly one-third of the total of all countries included above.

Little is known of the beef consumption of the various countries, and then only in combination with veal. The consumption of beef and veal combined was 7,652,000,000 pounds, dressed weight, in the United States in 1909; in the United Kingdom in 1906 it was 2,644,000,000 pounds; in Germany in 1913 it was 2,555,000,000 pounds, and in France in 1904 it was 1,635,000,000 pounds. The consumption of beef and veal in the United States is greater than that of the United Kingdom, Germany and France combined by a large difference.

The comparison with respect to the consumption of mutton and lamb is very different. The quantity for the United Kingdom is 1,139,000,000 pounds; for the United States, 602,000,000 pounds; for France, 353,000,000 pounds, and for Germany, 128,000,000 pounds. The United Kingdom consumes more mutton than the United States, France and Germany combined.

The United States consumes somewhat less pork than it does beef and veal, but Germany consumes nearly twice as much. The quantity of pork and pork products consumption for the United States is 7,196,000,000 pounds; for Germany, 4,716,000,000 pounds; for the United Kingdom, 1,349,000,000 pounds, and for France, 1,058,000,000 pounds.

Germany's consumption of beef and veal is about one-third of that of the United States; its mutton consumption about one-fifth, and its pork consumption nearly two-thirds.

The United Kingdom has a consumption of beef and veal that is about one-third that of the United States; of mutton nearly twice that of the United States, and of pork less than one-fifth.

The consumption of beef and veal in France is about two-thirds of that of either Germany or the United Kingdom, and over one-fifth of that of the United States; the mutton consumption of France is over one-half that of the United States, and less than one-third of that of the United Kingdom, and France's pork consumption is about one-seventh of that of the United States, over one-fifth of that of Germany, and about four-fifths of that of the United Kingdom.

(To be continued.)

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HARTFORD, WIS., U. S. A.**

March 10, 1917

THE NATIONAL PROVISIONER.

29

THE WEEK'S CLOSING MARKETS

FRIDAY'S GENERAL MARKETS.

Lard in New York.

New York, March 9.—Market steady; prime Western, \$10.65; Middle West, \$19.50 @19.60; city steam, 19½@19¾c.; refined Continent, \$20.75; South American, \$20.90; Brazil, kegs, \$21.00; compound, 14½@15¼c. nom.

Marseilles Oils.

Marseilles, March 9.—Copra fabrique, 194 fr.; copra edible, — fr.; peanut fabrique, 191 fr.; peanut edible, — fr.

Liverpool Produce Market.

Liverpool, March 9.—(By Cable).—Beef, extra India mess not quoted; pork, prime mess not quoted; shoulders, square, 112s.; New York, 102s.; picnic, 94s.; hams, long, 122s.; American cut, 130s. 6d.; bacon, Cumberland cut, 127s.; long clear, 131s.; short back, 132s.; bellies, 132s. Lard, spot prime, 133s.; American, refined, 28-lb. box, 140s.; May, 131s. 10½d. Lard (Hamburg), nom. Tallow, prime city, 49s.; New York City special, not quoted. Cheese, Canadian finest white, new, 158s. Tallow, Austrian (at London), 61s.

FRIDAY'S CLOSINGS.

Provisions.

The market was again active with values showing a good advance after a lower opening. Hogs were again strong.

Tallow.

The market was very firm with full quotations asked. Special loose quoted at 12½c.

Oleo Stearine.

The market was very firm at the highest of the year. Oleo quoted at 14½c. asked.

Cottonseed Oil.

Trading was active with values lower early followed by later improvement.

Market closed barely steady. Sales, 35,800 bbls. Spot oil, \$13.30 bid. Crude, Southeast, \$11.73@12. Closing quotations on futures: March, \$13.33@13.35; April, \$13.32@13.35; May, \$13.33@13.36; June, \$13.34@13.38; July, \$13.34@13.36; August, \$13.36@13.39; September, \$13.35@13.38; October, \$12.78@12.81.

FRIDAY'S LIVESTOCK MARKETS.

Chicago, March 9.—Hogs strong. Bulk of prices, \$14.60@14.95; light, \$14.20@14.90; mixed, \$14.45@15.05; heavy, \$14.40@15.05; rough heavy, \$14.40@14.55; Yorkers, \$14.50@14.65; pigs, \$11.35@13.75; cattle strong; beefes, \$8.50@12.50; cows and heifers, \$5.60 @10.50; Western, \$8.40@10.50. Calves, \$9.50 @13; sheep, steady, 10c. higher; lambs, \$12.40 @14.70; Western, \$11.65@12.40; native, \$11 @12.30; yearlings, \$12.60@13.90.

Omaha, March 9.—Hogs higher, at \$13.85@14.50.

Buffalo, March 9.—Hogs higher; on sale, 1,920, at \$15.25@15.50.

Kansas City, March 9.—Hogs higher, at \$13.95@14.95.

St. Joseph, March 9.—Hogs higher, at \$14.40@14.85.

Sioux City, March 9.—Hogs strong, at \$13.90@14.20.

Louisville, March 9.—Hogs higher, at \$13.80 @14.80.

St. Louis, March 9.—Hogs higher, at \$14.50 @15.

Indianapolis, March 9.—Hogs higher, at \$14.85@14.90.

PACKERS' PURCHASES

Purchasers of livestock by packers at principal centers for the week ending Saturday, March 3, 1917, are reported as follows:

Chicago.

	Cattle.	Hogs.	Sheep.
Armour & Co.	7,574	22,500	18,689
Swift & Co.	5,042	18,000	18,590
Morris & Co.	4,820	8,400	7,058
Wilson & Co.	4,091	10,500	8,978
G. H. Hammond Co.	2,446	4,600	...
Anglo-Amer. Provision Co.	306	3,600	...
Libby, McNeill & Libby	1,312	...	...
Western Packing & Provision Co.	14,000	hogs;	...
Miller & Hart	3,500	hogs; Boyd, Lunham & Co., 6,000	hogs;
Independent Packing Co.	9,000	hogs; Roberts & Oake, 3,800 hogs; Brennan Packing Co., 4,000 hogs; others, 14,000 hogs.	...

Kansas City.

	Cattle.	Hogs.	Sheep.
Armour & Co.	3,642	6,338	4,325
Fowler Packing Co.	679	...	2,237
Wilson & Co.	3,057	5,805	2,893
Swift & Co.	4,091	5,601	5,217
Cudahy Packing Co.	3,351	4,824	2,967
Morris & Co.	3,857	6,078	3,311
Others	334	2,146	40
Wolf Packing Co.	68	cattle; Schwartz, Bolen & Co., 2,348 hogs; Blount, 62 cattle and 970 hogs; Rice & Kirk, 5 cattle and 3,478 hogs; Hell Packing Co., 250 hogs.	...

Omaha.

	Cattle.	Hogs.	Sheep.
Morris & Co.	2,498	7,553	2,681
Swift & Co.	4,156	9,923	12,048
Cudahy Packing Co.	2,926	11,786	12,507
Armour & Co.	3,855	10,010	6,601
Swartz & Co.	...	7,043	...
J. W. Murphy	...	21,096	...
Lincoln Packing Co.	248	cattle; South Omaha Packing Co., 39 cattle; Krey Packing Co., 218 hogs.	...

St. Louis.

	Cattle.	Hogs.	Sheep.
Morris & Co.	3,661	3,737	1,036
Swift & Co.	2,964	3,503	1,180
Armour & Co.	3,551	1,530	1,363
East Side Packing Co.	166	2,647	...
St. Louis Dressed Beef Co.	1,121	...	...
Independent Packing Co.	185	445	...
Sartorius Provision Co.	...	333	...
Carondelet Packing Co.	7	467	...
American Packing Co.	41	862	...
Krey Packing Co.	14	1,330	...
J. H. Belz Provision Co.	...	321	...
Hell Packing Co.	2	...	...

SLAUGHTER REPORTS

Special reports to The National Provisioner show the number of livestock slaughtered at the following centers for the week ending March 3, 1917:

CATTLE.

Chicago	33,434
Kansas City	19,301
Omaha	13,812
East St. Louis	11,478
St. Joseph	5,574
Cudahy	393
Sioux City	6,206
New York and Jersey City	8,574
Fort Worth	7,756
Philadelphia	3,424
Denver	1,577
Oklahoma City	3,760

HOGS.

Chicago	122,746
Kansas City	39,182
Omaha	39,725
East St. Louis	43,689
St. Joseph	37,658
Cudahy	4,286
Sioux City	8,324
Ottumwa	10,178
Cedar Rapids	11,564
New York and Jersey City	25,371
Fort Worth	34,943
Philadelphia	7,152
Denver	8,256
Oklahoma City	14,539

SHEEP.

Chicago	52,694
Kansas City	21,370
Omaha	30,822
East St. Louis	4,286
St. Joseph	13,812
Cudahy	28
Sioux City	2,603
New York and Jersey City	16,055
Fort Worth	3,263
Philadelphia	4,577
Denver	7,077
Oklahoma City	12

RECEIPTS AT CENTERS

SATURDAY, MARCH 3, 1917.

	Cattle.	Hogs.	Sheep.
Chicago	800	13,000	1,000
Kansas City	100	1,000	...
Omaha	200	6,000	500
St. Louis	300	4,000	...
St. Joseph	200	2,000	...
Sioux City	300	6,000	200
St. Paul	400	1,400	...
Oklahoma City	600	1,400	...
Fort Worth	300	2,500	500
Milwaukee	707	...	...
Denver	212	48	...
Louisville	150	2,600	50
Cudahy	300	...	...
Indianapolis	200	3,000	300
Pittsburgh	400	1,000	...
Cincinnati	400	2,807	...
Buffalo	350	2,500	2,000
Cleveland	425	2,004	442
New York	44	98	...
Oklahoma, Canada	44	98	...

MONDAY, MARCH 5, 1917.

Chicago	14,000	42,000	14,000
Kansas City	12,000	9,000	6,000
Omaha	6,200	5,000	8,000
St. Louis	4,700	12,000	1,400
St. Joseph	1,700	5,000	3,500
Sioux City	3,500	7,000	...
St. Paul	4,200	9,000	50
Oklahoma City	2,250	3,000	...
Fort Worth	4,500	6,500	...
Milwaukee	100	261	...
Denver	1,400	600	4,300
Louisville	1,000	4,700	100
Detroit	720	...	...
Cudahy	500	...	...
Wichita	639	...	...
Indianapolis	1,400	5,000	100
Pittsburgh	2,000	5,500	1,500
Cincinnati	1,800	5,267	...
Buffalo	200	5,600	8,000
Cleveland	6,000	3,000	600
New York	2,944	8,521	5,725
Oklahoma, Canada	2,260	1,733	132

TUESDAY, MARCH 6, 1917.

Chicago	3,000	16,000	10,000
Kansas City	8,000	9,000	6,200
Omaha	6,700	14,000	14,000
St. Louis	4,200	11,000	500
St. Joseph	2,500	9,000	5,500
Sioux City	2,400	7,000	1,000
St. Paul	2,200	6,000	300
Oklahoma City	2,000	4,400	...
Fort Worth	3,000	5,500	200
Milwaukee	800	2,170	200
Denver	1,100	2,500	2,900
Louisville	100	1,000	50
Detroit	2,100	3,000	...
Cudahy	3,000	4,974	...
Wichita	960	4,000	...
Indianapolis	2,000	2,000	500
Pittsburgh	500	2,803	...
Cincinnati	350	1,600	...
Buffalo	350	2,500	1,600
Cleveland	300	1,000	200
New York	678	222	472
Oklahoma, Canada	596	432	100

WEDNESDAY, MARCH 7, 1917.

Chicago	12,000	33,000	15,000
Kansas City	4,800	8,000	3,000
Omaha	13,000	...	...
St. Louis	3,300	12,000	1,100
St. Joseph	5,000	10,000	...
Sioux City	10,000	...	...
St. Paul	7,000	...	...
Milwaukee	2,862	...	...
Louisville	1,500	...	...
Detroit	3,000	...	...
Cudahy	300	...	...
Wichita	5,000	...	...
Indianapolis	5,000	...	...
Cincinnati	800	2,839	300
Buffalo	350	5,600	4,000
Cleveland	1,000
New York	1,902	5,740	2,737

THURSDAY, MARCH 8, 1917.

Chicago	3,000	25,000	12,000

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HIDE AND SKIN MARKETS

(SHOE AND LEATHER REPORTER)

Movement is small. Prices are holding. The better grades of hides are wanted, but tanners' ideas and dealers' prices are too far apart for active trading.

Chicago.

PACKER HIDES.—Trade was decidedly slow. Operators expected operations to resume normal size with the first big movement. However, so much secrecy surrounded the large sales effected by one packer to a big consumer that other tanners were fearful of trading and paying more than the real market for hides. Tanners have been piecing in with foreign and country hides to avoid operating in the packer market. Still killers do not talk any weaker and believe their asked figures to be about right in view of relative strength in leather and to existing business conditions of an influencing nature. Native steers sold at 30 $\frac{1}{4}$ c. involving a car of early December river hides. No other movement was reported but numerous efforts were made to secure small parcels of native steers at 30c. and declined. Available stocks of this selection are large. About 3,000 October-November-December-January extreme light native steers brought 30c. Texas steers did not move. Nominal market is considered unchanged with killers talking 30c. or better for these hides. Heavy Texas steers are in small supply and quoted at 30 $\frac{1}{2}$ @31c. asked; lights 30@30 $\frac{1}{2}$ c. and extreme lights at 30c. nominal. Butt branded steers are also quiet. Market for business is believed to be about 30c., with most holders trying for 30 $\frac{1}{2}$ c. Last sales were at 31c. Available stocks are moderate. Colorado steers were also slow. Nominal market is believed to be about 30c. with most producers holding for 30 $\frac{1}{2}$ c. Stocks are moderately held as slaughter of these steers fell away sharply just before the holidays. Branded cows are strong in tone at 30c., the last sale figure. Available stocks are small and firmly held. Heavy cows quoted at 30c. last paid and nominal. Stocks are relatively small, but all sellers have January forward for sale. Light native cows last sold at 30c. A car of December slaughter in weights 25 to 45 lbs. brought that figure this week. A bid at 30c. was made for November light cows in straight weights and refused. Native bulls were quiet. Last sales were at 26c. basis, but current slaughter is offered at 24c. and nominal market is considered about 23c. Branded bulls are quiet. Last sales were at 30 $\frac{1}{4}$ c. basis. Nominal market for further business believed at 20@21c. with light weight Ft. Worth hides held considerably higher.

Later.—Packers quiet and waiting. Tanners are not bidding. Selling pressing nothing on market.

COUNTRY HIDES.—Movement was of rather moderate proportions and of a spotty character. Buyers were in and out of the market and were looking mainly for the better grades of hides and almost wholly for the light end of the list. Heavy steers were taken at 25c. and also at 24 $\frac{3}{4}$ c. for a car at each rate of good quality. Such hides run about three-quarters firsts with practically no grubby hides

in the seconds. Bids at 23c. are made for current receipt long haired grubby steers and refused with recent business at 24c. Some collectors with grub free steers talk as high as 27c. for their stocks owing to the relative strength in big packer native steers. Heavy cows sold at 24c. for a car of grub free hides running thirty per cent seconds. Current receipt heavy cows sold at 22c. involving one car of hides. These prices are considered nominal market on subsequent business. Holders are not anxious sellers. Buffs were not moved to any appreciable extent. One car of current goods realized 22 $\frac{1}{2}$ c., the former sale price for such goods. Better hides are being looked for and 24c. is the usual asking rate, while buyers' views are about 23c. No seconds were moved. These are quoted at about 21 $\frac{1}{2}$ c. The situation in the originating sections is steady at 22 $\frac{1}{2}$ @23 $\frac{1}{2}$ c. delivered basis for all weights of seasonable hides as to lots with most collectors in surrounding sections realizing 22c. delivered basis. Extremes sold at 25 $\frac{1}{2}$ c. for a car of current stock, which registers a decline of 1c. from prior rate of 26c. Back salting grub free extremes are wanted at the former sale rate of 27c., and sellers are talking 28c. owing to the better tone to the light hide market and good leather situation. One car sold at 27c. Branded cows rule quiet and nominal at 21c. flat basis last paid and 22c. generally asked. Available stocks are moderate. Country packer branded hides are quoted at 23@26c. nominal as to description. Available stocks moderate, as business of late has been slow. Bulls are still slow and quoted at 20c. last paid and 21c. talked for further business. Stocks are moderate. Country packer bulls quoted at 21c. last paid and nominal for further movement.

Later.—Countries steady. Moderate inquiry for better grades. Nothing offered except at high rates which retards movement.

CALFSKINS are strong in tone. Two cars of local first salted city skins sold at 41c., registering an advance of 1c. over prior price of 40 $\frac{1}{2}$ c. Bids at 40c. are repeatedly made in efforts to secure more skins, but collectors are booked well ahead and ask up to 45c. Receipts of calfskins will become larger from now on, with the crest of the run next month. Outside city calfskins quoted at 40c. paid for a car of eastern Ohio collection. Country run of skins sold at 36c., involving one car, with later bids at 37c. refused and 38@39c. asked. Deacons are steady at \$2.30@2.50 nominal and light calf at \$2.50@2.70. Kipskins sold at the former rate of 40c. involving one killer's stock of 50,000. October, November-December, January-February take-off. This is the same rate recently realized by two other sellers. The remaining unsold stock consists of one killer's November forward slaughter and 40c. was refused for these skins this week with 45c. demanded. Country kipskins are quoted at 30@32c. nominal for business. City kipskins quoted at 35c. asked with bids close up refused.

Later.—Calfskins strong. Rumors of movement in packer calkskins. Confirmation lacking.

HORSE HIDES are quiet. Buyers are entirely out of the market. Holders have meager stocks and usually talk stronger prices on account of the better tone to calfskins. Coun-

try run of hides quoted at \$8.25@8.50 lately paid and up to \$9 now asked. City hides quoted at \$9.25@10.50 nominal as to descriptions. Seconds quoted at the usual \$1 reduction with ponies and glues at \$3.50@4.25 and coltskins at \$1@2.

HOGSKINS are steady at \$1.10@1.35 nominal for average country run of skins with rejected pigs and glues out at half rates. No. 1 pigskin strips quoted at 11@12c.; sales at inside of about six cars for export account. No. 2 strips quoted at 10@11c. asked; inside lately paid for export. No. 3 strips range at 5@7c. as to measurements.

SHEEP PELTS.—Pulled wool and pickled sheepskin markets are firm in tone which lend confidence to pullers in bidding on sheepskins offered. Packer sheep and lambskins of current local and river slaughter quoted at \$3.85 @4 last paid. Bids at 4.02 $\frac{1}{2}$ made and refused for similar skins which were offered at \$4.05, but later withdrawn and valued at \$4.25. Heavy packer sheepskins last sold at \$5.10. Coatstock shearlings moved at \$1.75@2; Angora goatskins sold at \$3.35; common goats brought \$2. Dry goatskins sold at 50c.@\$1; dry western sheepskins quoted at 35@40c. with inside nearer the actual market as bids at that rate are made. Pickled sheepskins are going at \$16.50@18 per dozen as to descriptions. Inside for lots predominating with lambs.

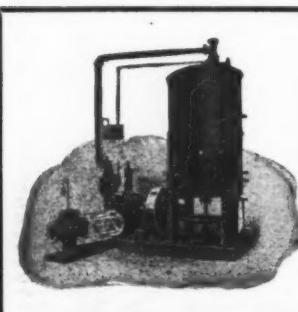
New York.

PACKER HIDES.—More activity was displayed in this market the past week than has been the case for weeks past. Seven cars of spready native steers running from July to December 31 were sold at 31 $\frac{1}{4}$ c. Another lot consisting of six cars of spready native steers from August to December inclusive sold at 31 $\frac{1}{2}$ c. A car of Kansas City late November and December native steers sold at 30 $\frac{1}{4}$ c. Later a car of spready native steers, late September and early October, was sold by a local packer at 31 $\frac{1}{2}$ c. Native steers are nominally quoted at 30 $\frac{1}{2}$ c.; butt brands, 30 $\frac{1}{2}$ c.; Colorados, 30c.; all weight cows, 29c.; native bulls, 24 to 25c., and spready native steers at 31 $\frac{1}{2}$ @32c. In small packer hides a sale is noted of 2,000 outside all weight cows at 26 $\frac{1}{2}$ c. There are more inquiries for hides in this market. Brokers are pressing for business, but tanners and holders' ideas are still far apart in most cases.

COUNTRY HIDES.—There are no new developments in this market. Some western dealers continue to talk firm partly on strength of some packer sales that have gone through, and also on rumors of further large sales made in Chicago. Tanners, however, seemingly are not impressed with these sales and continue to hold off except where offerings are made that are within their ideas. Ohio dealers continue to talk around 26@27 $\frac{1}{2}$ c. for extremes and are quoting 23 to 24c. for buffs. Some sales have been made in the west of good quality hides at the outside prices, but the number of hides involved have had no bearing on the market. An offering is noted of a car of western extremes at 26 $\frac{1}{2}$ c. A bid of 26c. was refused for a carlot of Ohio extreme. Buyers' ideas on buffs are about 1c. under that of shippers. Some recent sales have been made of western buffs at 22 $\frac{1}{2}$ @23c. An offering is noted of a car of middle western buffs at 23c. Southerns are more active. Some inquiries were noted in this market. A car of northern-southerns, 25 to 60 lbs., sold at 24c. Far southern abattoirs, 25 to 60 lbs., are offered at 25c. Southern kips are offered at 25@27c. according to quality. Northern-southerns, all weights, and free of ticks, are talked around 24@25c. Middle southerns are quoted at 22 $\frac{1}{2}$ @23 $\frac{1}{2}$ c. Canadian hides, 20 lbs. and up, are offered around 25c. New York state, New England and Pennsylvania, all weights, are offered in less than carlots at 22@23c. Some sales have been made of small lots of these hides at 21@22c. flat.

CALFSKINS.—The market continues firm following the recent sales in New York cities.

(Concluded on page 41.)



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Is trouble proof, produces even product. Obtains the highest percentage of grease. Produces the highest test tankage. Is odorless, economical, compact and sanitary.

C. H. A. Wannenwetsch & Co., Buffalo, N. Y.

Packing House Architects and Engineers.

LIVE STOCK MARKETS

CHICAGO

(Special Letter to The National Provisioner from the National Live Stock Commission Co.)

Union Stock Yard, Chicago, March 7.

The suspicion frequently expressed during the winter season, when receipts were coming so liberally, that the spring and summer might see a shortage, is being realized. The trade generally expected liberal receipts to continue at least until the middle of March, but the check came earlier than expected, and were it not for a stagnated condition of the fresh meat market in the East prices would be considerably higher than they are now. With only about 28,000 cattle for the first three days of this week, buyers were very anxious to secure the available supply of cattle that were good enough to bring over \$11 at prices 15@25c. higher than Monday, which is 30@50c. higher for the three days on this class of cattle, but the top does not indicate the full extent of this advance, as \$12.25 looks to be the limit as we go to press. Classes of cattle selling between \$10@11 per cwt. only show an advance of 10@15c. or 20@30c. for the week. Under 10c. a pound there has been only an active market, as the receipts have consisted very largely of this class of cattle, and the demand, therefore, was not sufficient to raise the price. Generally speaking, the quality of this week's receipts is not near as good as is usual at this time of the year. This indicates that the high prices, together with the high price of corn, are being accepted by the man in the country, and indicates a still shorter supply later on. This condition is also a strong factor as regards prices, as the advance in the market means more to the producer on account of the lower quality of the receipts. Good to choice steers command \$11.50@12.25; medium to good, \$10.50@11.50; fair to medium, \$9@10.50, and common to fair, \$7.50@9.

The light receipts of cattle also have affected butcher cattle to the extent that prices are 30@50c. higher than last week's closing prices, or about a quarter higher than the low spot last Wednesday. Prices have arrived at about the high spot of the season. Bulls are 25c. higher than a week ago. Calves 50@75c. higher, a few choice selling today as high as \$11.75.

With only about 92,000 hogs the first three days of this week, Wednesday's market on the opening round continued its "wild" upturn to the extent of a still further advance of 15@25c., making prices about \$1 per cwt. higher than the close last Saturday, prime heavy and good shipping grades selling largely at a range of \$14.75@14.90, with a reported top of \$15.05 per cwt. The big packers, however, were unwilling to follow this advance, and laid back until sellers were willing to discount the market to the extent of the early advance. While it is hard to predict with any certainty the outcome, still we believe it logical to look for a setback in view of the strong advances of the last few days. We feel, however, that hogs are going to demand strong prices throughout the coming spring and summer.

Continued light supplies and an excellent demand have forced lamb prices 25@35c. per cwt. above last week's close, with the urgent demand centering in the light to medium weights. However, the heavy grades have followed and have shared a full portion of the advance. There are still a number of feeders daily looking for stock that is suitable to take out on shearing account, but there is practically nothing coming suitable for the purpose. With hog prices advancing so rapidly and light supplies in sight, this is as well as the scarcity of sheep and lambs will have a tendency to strengthen this branch of the trade, and while present prices are high, no doubt new high records will be made before the end of the feeding season. The wool situation is very strong, and it looks as though desirable grades would soon move up to the 50c. notch. Surely the flock-

master never occupied a more safe and secure position than he does today. We quote: Good to choice lambs, \$14.25@14.85; poor to medium and heavyweights, \$13.50@14; well-wooled shearing lambs, \$13.75@14.25; culs, \$12@13; good to choice light yearlings, \$13.25@13.60; medium fleshed and heavy yearlings, \$12.50@12.75; fat wethers, \$12.25@12.50; good to choice ewes, \$11.75@12; poor to medium, \$10.75@11.50; culs, \$7@8.50.

KANSAS CITY

(Special Letter to The National Provisioner.)

Kansas City Stock Yards, March 6.

Cattle receipts were 7,500 head, and prices were strong to 10c. higher. Hog supply was 9,000, market mostly 40c. higher, top \$14.50. Sheep and lamb supply was 6,000, market 15c. to 25c. higher, no choice lambs, top \$14.65. In all departments receipts fell below the moderate estimates, the light supply, common at all points, responsible for the advancing market.

Choice to prime native steers were almost lacking this week, a few today at \$11 and \$11.50. There has been a fair supply of good to choice Western pulp fed steers, at \$10.75@11.25, weights 1,200 to 1,350 lbs., and a good run of good pulp steers, at \$10.20@10.70, 1,050 to 1,190 lbs. Middle grades of native steers bring \$10@10.90, light weight steers selling at \$8.75@9.75. Ten cars of Idaho pulp fed cattle arrived today, the steers at \$10.70 and \$10.80, mixed cows and heifers \$9.20, bulls \$8.90 and \$9. Best heavy native cows sell up to \$10, bulls \$9.75, most of the cows at \$6.50@8.75, and bulls \$7.25@8.25. Veal calves are the real bargains, 50c. lower this week, tops \$11.50.

Adding a dollar a head to live hog values overnight is a popular pastime with packers this week, nearly all the packers paying up to the top price today, \$14.50, 45 cents above top yesterday. Light weights did not get quite as much advance, but sold up to \$14.30 at that, pigs also higher, mostly \$11@12.75. Lighter average weight tells the story of efforts to gather hogs, 183 lbs. here last week, as compared with 189 lbs. for February this year and 199 lbs. in February last year. The Government market office today reports stronger prices for fresh pork at Boston and New York, and an advance of half a cent to one cent a pound at Philadelphia.

Top lambs today at \$14.65 were from same feed lot that furnished lambs at \$14.40 yesterday, choice lambs worth \$14.75, equal to the best time this season, three weeks ago. Heavy lambs sold at \$14.35 yesterday, 86 lbs. average, half a dollar above last week on that kind. No choice ewes have been here for ten days, fair to good ones this week at \$11.50, prime ewes worth \$12 or better, yearlings today \$13.50.

ST. LOUIS

(Special Letter to The National Provisioner.)

National Stock Yards, Ill., March 7.

Cattle receipts at this market approximate 16,000 for the week ending today of which 2,200 were sold on the southern side. The anticipated decrease in the receipts seems to have arrived although the number of cattle recorded for the week equals the corresponding week a year ago. The market, generally, is strong and on a somewhat higher basis than at our last writing. We still lack strictly choice to prime cattle in the offerings either in medium, or heavy weights. Our heaviest cattle run for the most part between 1,200 and 1,300 lbs. and several droves in this range of weight have sold this week up to \$11.40; this is the best price that has been paid upon our market since our holiday sales in December. Some very good cattle are selling between \$10@10.85 with the

plainer grades of the good killers ranging from \$8.50@9.75; the common steers are selling from \$7@8.50, with the bulk of all sales in the beef cattle department swinging around the \$9 mark. We again have to mention the beef cattle we are receiving from the southeast territory. A load of very fair Alabama steers averaging 767 lbs. sold for \$9 on Tuesday; they ranked fully up to the same class of cattle from our northern native territory. Our butcher cattle continue to come in good volume, the bulk of them being of the plain and medium grades. The yearling trade is on a good strong basis while cow stuff, particularly the fair to good kind is perhaps selling better than any other class on the market. Fancy cows are quoted from \$9@9.50, and a number of sales are recorded at the top figure. The medium to good cows \$6.50@7.75 and the bulk of the sales are within this range. Choice to fancy light heifers are quoted at \$10@10.50 with the

(Continued on page 42.)

OMAHA

(Special Letter to The National Provisioner.)

So. Omaha, Neb. March 6.

The fat cattle market last week was in most respects a repetition of the week previous and this week's trade is starting out in pretty much the same fashion; that is, demand is active and the trend of values is higher the first half of the week and the strength and activity disappear before the close. During the past two days under the influence of very moderate supplies prices have advanced fully 25c. as compared with the bad closing trade last week and both beef steers and cow stuff are selling today about as high as they ever sold at this point. Poor to prime beesves are selling from \$8.50@11.50, the bulk of the fair to good 1,000 to 1,250-pound cattle going largely around \$9.75@10.75. Cows and heifers are selling from \$5.50@9.50, the fair to good butcher and beef stock mostly at a spread of \$7.50@8.75. Demand from both local packers and shippers has been good of late and there is a very strong undertone to the market. Veal calves continue in limited supply and quotably steady to strong at \$9.25@11.75 and bulls, stags, etc., find a very good outlet at strong figures, from \$6.00@9.00.

Hogs have scored an even \$1 advance as compared with a week ago today. Receipts have been dropping off some, but quality is still pretty good. Last month the average weight was around 223 pounds and the arrivals do not include a great many pigs or underweight loads. Shippers are eager buyers almost every day, with packers following the advance under protest, all buyers paying a premium for the heavy and butcher loads but paying more attention to quality than to weight. With 16,000 hogs here today prices ruled 25@40c. higher. Tops brought \$14.20 as against \$13.20 last Tuesday and the bulk of the trading was \$13.90@14.10 as against \$12.90@13.15 just a week ago.

After fluctuating more or less sharply from day to day, the market for sheep and lambs has again advanced to practically the high point of the season and values are around a quarter higher than they were a week ago. Supplies have been of moderate proportion and there is the same vigorous demand from packers for desirable offerings of all kinds. Choice, light and handy weight lambs are quoted at \$14.50@14.75, heavy lambs going at \$13.50@14.25. Yearlings are selling at \$11.50@13.00; wethers at \$10.50@12.00, and ewes at \$10.00@11.60.

NEW YORK LIVE STOCK

WEEKLY RECEIPTS TO MARCH 6, 1917.

	Sheep and	Beeves.	Calves.	Lambs.	Hogs.
New York	2,154	2,638	786	6,321	
Jersey City	5,197	4,485	7,509	19,050	
Central Union	1,523	593	7,760	...	
Totals	8,874	7,716	16,055	25,371	
Totals last week.....	12,565	7,879	23,106	23,553	

ICE AND REFRIGERATION

NEW CORPORATIONS.

Elizabeth, N. J.—The Rail & Harbor Milk & Cream Company, 207 Broad street, has been incorporated with a capital stock of \$50,000.

Truman, Ark.—John Mason, J. F. Mason, G. Matthews and others have incorporated the Truman Ice Company. Capital stock \$4,000.

Bellevue, Ky.—John S. Weigand, John M. Weigand and Alex. Weigand have incorporated the John S. Weigand Ice Company. Capital stock, \$10,000.

Lindale, Tex.—Robert F. Yarbrough, W. D. Coleman, L. W. Pierce and others have incorporated the Union Creamery Co. Capital stock, \$10,000.

Baltimore, Md.—Joseph Gottschalk, J. H. Thomas and Edwin M. Fleischmann have incorporated the Standard Brewery with a capital stock of \$125,000.

Terrell, Tex.—Matthew Cartwright, Jr., G. H. Meason, Jr., and H. E. Gardner have incorporated the City Ice & Sales Company with a capital stock of \$3,000.

Vicksburg, Miss.—The Merchants' Co-operative Creamery Company has been incorporated by A. J. Martin, W. S. Jones, P. P. Vail and others. Capital stock, \$5,000.

Atlanta, Ga.—The American Ice Cream Manufacturing Company has been incorporated with a capital stock of \$10,000. The incorporators are: J. B. McCallum and Earl Sims.

Port Arthur, Tex.—The Consumers' Ice & Coal Company has been incorporated with a capital stock of \$30,000 by J. H. Jakowicz of Port Arthur, J. E. Josey and R. C. Miller of Beaumont, Tex.

East Radford, Va.—The Holland Dairy & Creamery Company has been incorporated with a capital stock of \$75,000 with A. E. Green of Roanoke, Va., as president and J. L. Vaughan of Shawsville, Va., as secretary.

Wilmington, Del.—The Riverside Ice & Storage Company, to harvest, store and manufacture ice and to conduct a cold storage plant, etc., has been incorporated, under the laws of the State of Delaware, with a capital stock of \$50,000.

Baltimore, Md.—Jacob Abramowitz, Wm. Abramowitz, Nathan Bless and Max Selikovitz have incorporated the Maryland Creamery Company, 1726 East Pratt street, with a capital stock of \$40,000. The Maryland Dairy Company's plant, 1700 East Pratt street, has been purchased and improvements will be made to increase the capacity to \$250,000 gallons yearly.

ICE NOTES.

Saluda, S. C.—A 10-ton ice plant will be erected by the Public Service Corporation.

Columbia, Tenn.—Refrigerating machinery will be installed by the Columbia Produce Company.

Jackson, Tenn.—The installation of ice cream machinery is contemplated by the Bear Bros. Ice & Coal Company.

Grandfield, Okla.—The ice and electric light plant at Grandfield, recently destroyed by fire, will be rebuilt by Maple & Green.

Newport, Ark.—It is reported that the establishment of an ice cream factory at this point is contemplated by S. Switow of Louisville, Ky.

Russellville, Ark.—The Shinn Building in Russellville has been leased by Elbert Garrett of Clarksville, Ark., and will be equipped as an ice cream factory and creamery.

Nashville, Tenn.—Contract has been let by John Decker & Son for the erection of a two-story, 30x100 ft., brick and concrete building to be used for the manufacturing of ice cream and candy.

PROPERTIES OF SATURATED AMMONIA VAPOR.

A Detailed Explanation of the Ammonia Table for the Uninitiated.

(A. G. Solomon in Refrigerating World.)

In engineering there are two tables which contain the constants that are used at all times in the solving of problems which come up before the designer and operating man and all those in the classes between these two, the steam tables and the ammonia tables.

In the problems concerning the economical generation and distribution of steam the steam table is referred to.

And so with the problems that confront those engaged in any of the branches of refrigeration. The ammonia table is an absolute necessity and contains more real information than the greater number of refrigerating engineers realize. These tables cannot be memorized, but we can be so familiar with them that we know exactly what they mean. A study of them is interesting as well as instructive.

The table of properties of saturated ammonia is referred to nearly every time that any problem met with in refrigeration is to be solved. The designers, consulting engineers, erecting men, operating engineers and all from one end of the line to the other must look to this table for the information they need when planning, building or running any refrigerating machinery.

When a cooler or ice tank is to be furnished with coils the table is looked to so that a point is obtained from which figuring

can begin. The size of suction, discharge and liquid lines must be determined, and this reckoning is all based on the constants given in the ammonia tables.

The refrigerating capacity of ammonia compressors, condensers and all such apparatus must be figured, and the ammonia table is necessary so that we may know pressures, temperatures and volumes. The number of feet of coils surface necessary to accomplish a certain amount of refrigerating effect is figured from constants which tell us the amount of ammonia which can be evaporated and pumped under given conditions. In fact, there is no problem in refrigeration which does not demand a knowledge of the ammonia table for its proper solution.

Everyone in any way connected with or interested in the refrigerating industry must know how to sensibly use these tables. It is for the individual good of all to study these figures and know just what they really mean. It is the object of this article to make the table plain so that it is readily understood by those who use it for the ordinary problems met with in every day practice.

Properties of saturated ammonia can be found in nearly all catalogues sent out by ice machine manufacturers. There is some little difference found in some parts of these tables, but for ordinary use they are close enough.

In Compend of Mechanical Refrigeration and Engineering by J. E. Siebel we find the tables as calculated from the formula of Professor De Volson Wood by George Davidson. This is the most common table, and is the one in almost general use.



Leaking Ammonia Fumes are deadly as well as costly.

In such emergencies the

NATIONAL AMMONIA HELMET

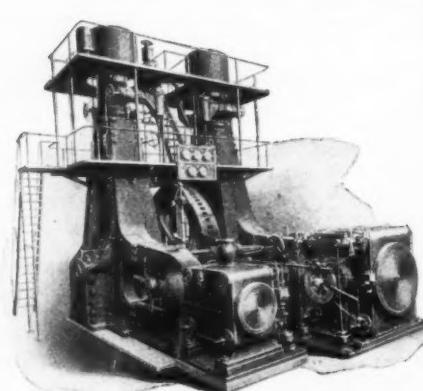
enables the wearer to enter the fumes instantly and safely for repairing leaks or to rescue a fellow workman.

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Plant with the
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Write us advising what you have been doing and what additions you have contemplated.

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Purity Is Essential In Ammonia

For Refrigerating and Ice Making. Because nothing will reduce the profits of your plant so surely as Ammonia laden with organic impurities.

BOWER BRAND Anhydrous Ammonia

is made from pure Aqua Ammonia of our own production, thoroughly refined and purified. Send for Free Book and Calendar.

HENRY BOWER CHEMICAL MANUFACTURING CO., 29th Street and Gray's Ferry Road PHILADELPHIA, PA.

The tables by G. A. Goodenough and Wm. E. Mosher are somewhat different, and are of a later date. Either will answer the purpose for this explanation. First we will consider the one found in Siebel's Compend.

To begin we will see what the title of the table means, "Properties of Saturated Ammonia." In the dictionary we find that the word "properties" means characteristics or distinctive qualities. So that table gives the distinctive qualities which are peculiar to saturated ammonia vapor. Next we come to the word saturated. To explain this it is well to remember that anhydrous ammonia has three distinct states: the liquid state, the saturated and the superheated. This table deals with the saturated state only. For the liquid and superheated states other tables are necessary.

Ammonia vapor is saturated when it is in contact with some of the liquid from which it arises. In this state temperature and pressure are functions of each other. At a given pressure we have a certain temperature so long as the ammonia remains in a saturated condition. In the liquid and superheated states the pressure does not determine the temperature. The temperature of the liquid depends on the temperature of the cooling water and the surrounding atmospheric conditions regardless of the pressure. The temperature of the superheated vapor or gas depends on the temperature of the surroundings and on the heat of compression.

Ammonia vapor becomes superheated in the evaporating coils when vaporization of the liquid is completed and the gas continues to pass through the coils which are surrounded by any substance of a higher temperature than that of the temperature of the vapor due to its pressure. The degree or amount of superheat is measured from the saturated temperature.

If the temperature at saturation is raised while the pressure is held constant the ammonia vapor changes into a superheated gas. If the pressure is raised and the temperature is held constant the saturated vapor becomes liquid. Thus in the ammonia condenser the pressure must be high enough above the pressure which corresponds to the saturated temperature to allow the ammonia to become liquid. This raising of the pressure is the one and only duty of the ammonia compressor. At the expansion valve the pressure on the ammonia is reduced, and this allows the vaporization of the liquid which enters the coils of the low pressure side of the system.

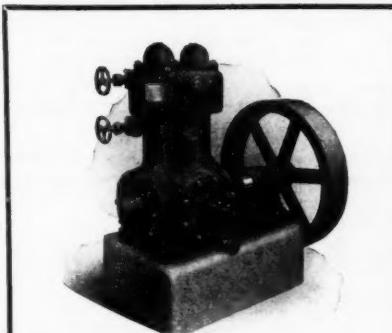
If we consider that ammonia boils at about 28.5 degrees below zero at atmospheric pressure we will be able to more clearly understand the relation between pressure and temperature. Take a test tube of liquid ammonia into a room having a temperature of 28.5 degrees below zero and the liquid will evaporate slowly owing to the heat of the room. The vapor that is given off is saturated. Now we lower the temperature of the room and the liquid ceases to evaporate. If we raise the temperature of the room the liquid will evaporate more rapidly. And as this vapor leaves the liquid it becomes super-

Specify BOWER BRAND AMMONIA, which can be obtained from the following:

ATLANTA: M. & M. Warehouse Co.
BALTIMORE: Werner Moving, Haul, & Stge. Co.
BOSTON: Fifield, Richardson & Co.; C. P. Duffee.
BUFFALO: Keystone Warehouse Co.; Bellriegel & Company.
CHICAGO: Waken & McLaughlin.
CINCINNATI: Pan-Handle Storage Warehouse.
CLEVELAND: General Cartage & Storage Co.; Harry E. Bollinger.
DETROIT: Riverside Storage & Cartage Co.; Newman Brothers, Inc.
DALLAS: Oriental Oil Company.
HAVANA: O. B. Cintas.
HOUSTON: Texas Warehouse Co.
INDIANAPOLIS: Railroad Transfer Co.
JACKSONVILLE: St. Elmo W. Acosta.
KANSAS CITY: Crutcher Warehouse Co.
LIVERPOOL: Peter R. McQuie & Son.
LOS ANGELES: York-California Construction Co.
LOUISVILLE: Union Warehouse Branch.
MEMPHIS: Patterson Transfer Co.
MEXICO, D. F.: Ernst O. Heinsdorff.
MILWAUKEE: Union Transfer Company.
NEWARK: American Oil & Sup. Co.
NEW ORLEANS: Chas. F. Raatz; United Warehouse Co., Ltd.

NEW YORK: Roessler & Hasslacher Chemical Co.; Shipley Construction & Supply Co.
NORFOLK: Nottingham & Wrenn Co.
OKLAHOMA CITY: O. K. Transfer & Stor. Co.
PHILADELPHIA: Henry Bower Chem. Mfg. Co.
PITTSBURGH: Penna. Transfer Co.; Newman Brothers, Inc.; Penna. Brewers Supply Co.
PORTLAND: Northwestern Transfer Co.
PROVIDENCE: Rhode Island Whee. Co.; Edwin E. Knowles.
RICHMOND: Bowman Transfer & Stge. Whee. Co.
RIO DE JANEIRO: F. H. Walter & Co.
ROCHESTER: Rochester Carting Co.; Shipley Construction & Supply Co.
SALT LAKE CITY: Utah Soap Co.
ST. LOUIS: Pilshy-Becker Eng. & Supply Co.; McPheeters Whee. Co.
SAN ANTONIO: Oriental Oil Co.
SAN FRANCISCO: York-California Construction Co.; Haslett Warehouse Co.
SAVANNAH: Atlantic Lubricants Co.; Benton Transfer Co.
SPOKANE: Spokane Transfer Co.
SEATTLE: York Construction & Supply Co.
TOLEDO: Moreton Truck & Storage Co.; F. W. Babcock.
WASHINGTON: Littlefield, Alvord & Co.

WATCH PAGE 48 FOR BARGAINS



MECHANICAL REFRIGERATION

A Modern Sanitary Plant equipped with MECHANICAL REFRIGERATION is a good advertisement—attracting new patrons and broadening your field. The results from this feature alone have, in many instances, justified the investment.

We can be of real service to you in suggesting refrigerating Equipment that will meet your requirements most efficiently and economically.

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and prices.*

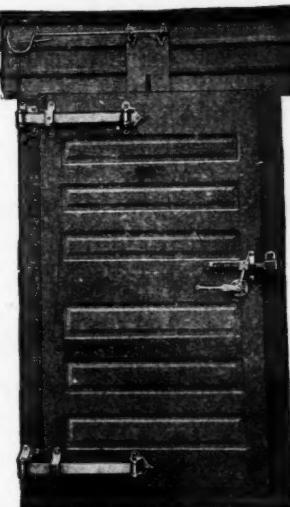
York Manufacturing Co.

*Ice Making and Refrigerating
Machinery Exclusively*

YORK, PA.

DOORS

For Cold Storage
and Freezers



Have you ever examined our
"JONES" or **"NOEQUAL"**

type of Door, and noted the heavy material used in construction, or how the massive "Jones" Automatic Fastener and "Jones" Adjustable Spring Hinges keep the door tight against the double and triple seals of contact.

If not, it's time! You should know why the Big Packers use our doors almost exclusively.

Made with or without trap for overhead rail. Cork insulated. Built for strength. A 96-page illustrated catalog upon request.

JAMISON COLD STORAGE DOOR CO.
Formerly

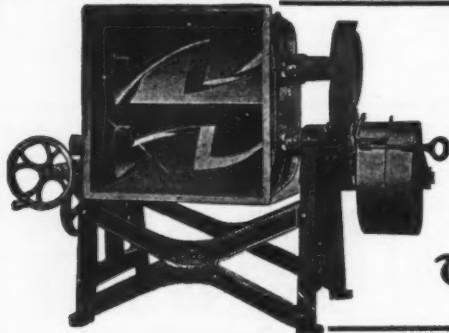
JONES COLD STORE DOOR CO.
Hagerstown, Maryland, U.S.A.

March 10, 1917

BREWERS and PACKERS SPECIAL ENAMEL

An enamel that will give service on the walls and ceilings of rooms where live steam, grease and fumes compete in attempts at destruction.

THE TROPICAL PAINT AND OIL CO.
Cleveland, O.



WHEN THINKING

of a meat mixer think of the satisfaction and long service had from the

Lynn-Superior Mixer

The original double-arm tilting machine. Imitated but not equaled.

Ask your dealer or write for a list of users in your vicinity.

The Lynn-Superior Co.
Cincinnati, Ohio

United Disposal & Recovery Co.

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MUNICIPAL WASTE DISPOSAL PLANTS

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LARD PAILS

heated as it takes the same temperature as the atmosphere in the room.

The greater the pressure exerted on the liquid the greater heat is required to cause vaporization. Now we will take the ammonia and subject it to a pressure of 15.67 pounds. Under this pressure the ammonia will remain a liquid so long as the temperature is kept below zero. Above zero vaporization will take place. Now we will take the ammonia as it is in the ammonia condenser. At 186.92 pounds gauge pressure the ammonia is in a liquid state when the temperature is at 96 degrees or below. From the foregoing we see why the condenser pressure is higher when warm water is used as a cooling agent. The warmer the water the higher the pressure has to be to convert the ammonia to a liquid.

In the ammonia condenser we have ammonia in its three states. It enters as a superheated gas from the compressor. This superheat has to be withdrawn and the vapor then becomes saturated and has a temperature which depends on the pressure in the condenser. Ammonia has to be reduced to this temperature before liquefaction takes

place. Then the ammonia is in the liquid state in the bottom part of the condenser, a superheated gas at the inlet and a saturated vapor during the liquefying stage.

Now if we look at the table as given in Siebel's Compend we see that it is divided into eleven columns and deals with temperatures from 40 degrees below zero Fahrenheit to 100 degrees above. The pressures are from 10.69 to 215.12 pounds absolute per square inch. The first and last column give the temperature in degrees Fahrenheit or as noted on the ordinary thermometer.

The second column gives the absolute temperature. The absolute temperature is necessary when solving some of the problems dealing with ammonia and refrigeration.

The real zero of temperature is supposed to be about 431 degrees below the zero on the Fahrenheit thermometer. It is that temperature at which all motion of the molecules of a gas are absolutely still and dead. When the temperature as shown on the Fahrenheit thermometer is known the absolute temperature is found by adding 461 to the temperature when it is above zero or subtracting when below zero.

Properties of saturated ammonia:

Temperature		Absolute pressure		Gauge pressure	Heat of vaporization	Volume of vapor per pound	Volume of liquid per pound	Weight of vapor in pounds per cu. ft.	Weight of liquid in pounds per cu. ft.	Degrees F
Degrees	Absolute	Pounds per sq. ft.	Pounds per sq. in.	pounds per sq. in.	thermal units	cu. ft.	cu. ft.	cu. ft.	cu. ft.	temperature
0	460.66	4373.10	30.37	15.67	565.50	9.028	.02461	.1107	.40650	0

Fahrenheit	Absolute
-10	451
0	461
10	471

The absolute zero point was arrived at or calculated in the following manner. A perfect gas under constant pressure and at 32 degrees temperature will expand — of its volume when heated 1 degree. If this be so then the volume of the gas becomes zero if cooled down 493 degrees below freezing or 461 degrees below the Fahrenheit zero. The absolute zero is also given as 459.64 degrees below the Fahrenheit zero. In this connection it is well to remember that when using any ammonia table the table used must not be confused with any other.

The third and fourth columns give the absolute pressure. We need not consider the third as it deals with square feet, and this is seldom used in any problems. The absolute pressure is that found when the atmospheric pressure is added to the gauge pressure. Atmospheric pressure is 14.7 pounds per square inch at the sea level.

The fifth column gives the pressure as we see it on the pressure gauges connected with the refrigerating machines and needs no further explaining.

One thing that may be said is that all gauges should be tested at least once a year so as to be sure that they show the correct pressure. A thermometer in the suction line close to the compressor is a good thing to compare with the back pressure gauge. If the ammonia is not superheated at the place where the thermometer is inserted the temperature shown will be the same as that given in the ammonia table corresponding with the gauge pressure. A refrigerating plant of any size or kind will be operated much more successfully if there are thermometers inserted in the liquid, discharge and suction lines and their readings taken and compared with the gauges.

The sixth column gives the number of British thermal units (B. t. u.) or heat units necessary to vaporize a pound of liquid ammonia at the temperature given in the first column and the gauge pressure given in the fifth.

Heat is measured by the B. t. u. which is the amount of heat necessary to raise the temperature of one pound of pure water 1 degree.

Thus in making one pound of 16 degree ice water from one pound of 80 degree water the temperature of the water is first lowered to 32 degrees by the withdrawal of 80-32 or 48 heat units. (The specific heat of water is one.) Now to change the one pound of 32 degree water to 32 degree ice 143.5 heat units will have to be withdrawn. This 142.5 B. t. u. is called the latent heat of ice, and is the number of heat units withdrawn without any change of temperature. This 143.5 B. t. u. is also the heat required to change one pound of 32 degree ice to 32 degree water, as is the case when ice is melting. Latent heat is not shown on the thermometer. Next the temperature of the ice is lowered to 16 degrees. This requires the withdrawal of 8 B. t. u. The reason that this is 8 instead of 16, as it would be in the case of water, is that the specific heat of ice is .5 or half that of water. Now that we see what a heat unit is we will take up the heat of vaporization.

The number of B. t. u. required to vaporize a pound of ammonia changes with the pressure and corresponding temperature.

To cause the vaporization of ammonia in a coil heat is necessary, and this is drawn from the surrounding substance. In coolers this heat is taken from the product that is being refrigerated. Each pound of liquid

(Continued on page 41.)

FOR PURCHASING DEPARTMENTS

ARGUMENTS FAVOR MOTOR TRUCKS.

Two arguments made in behalf of the motor truck are for its superior cleanliness over horses and in the fact that it can be housed in about one-third the space. Statisticians are busy proving that the street-cleaning bill of American municipalities could be cut down one-half by the elimination of horses.

"A recent purchaser of Kissel trucks, who had been hard to convert from the horse haulage method, was finally influenced by the fact that they would take up about one-third the stabling room occupied by his horses," says Russell L. Engs, metropolitan distributor of the KisselKar. "He figured that he could use the additional space to much better advantage both from a pecuniary and sanitary standpoint."

YORK REFRIGERATING EQUIPMENT.

The York Manufacturing Company, York, Pa., reports recent installations of refrigerating machinery and equipment as follows:

Texas Brewing Company, Ft. Worth, Texas; one 25-ton vertical single-acting refrigerating machine, direct connected to a cross compound poppet-Corliss valve engine, and one 8-ton vertical single-acting belt driven enclosed type refrigerating machine, together with condensing side, including 18 "Shipley" flooded atmospheric ammonia condensers.

Farmers Co-operative Packing Co., Madison, Wis.; one 40-ton and one 12-ton horizontal double-acting refrigerating machines, each direct connected to a Corliss valve engine, and one 40-ton horizontal double-acting belt driven refrigerating machine, together with condensing side complete, also 4 double pipe counter-current brine coolers, each 18 inches 2 feet long, 12 pipes high, made of 2-inch and 3-inch pipe, and 22,200 feet of 2-inch direct expansion piping for miscellaneous storage rooms.

Wegner Machine Company, Buffalo, N. Y.; one 35-ton vertical single-acting high speed belt driven enclosed type refrigerating machine. This machine was installed for the Binghamton Ice Cream Co., of Binghamton, N. Y.

Yarbrough & Bellinger Co., Charlotte, N. C.; 5 "Shipley" flooded atmospheric ammonia condensers, each 20 feet long, 12 pipes high, made of 2-inch pipe; a 125-ton shell and tube steam condenser, vertical, and miscellaneous material for overhauling their ice plant.

Tulsa Ice Company, Tulsa, Okla.; one 65-ton vertical single-acting refrigerating machine, direct connected to a Corliss valve engine, and condensing side complete, together with a 35-ton flooded freezing system complete.

Swift & Company, Alstead & Division Sts., Chicago, Ill.; one 20-ton horizontal double-acting belt driven refrigerating machine and condensing side complete, also 7,800 feet of 2-inch direct expansion piping for storage room.

W. H. Daugherty Refining Co., Petrolia, Pa.; one 34-ton vertical single-acting high speed belt driven enclosed type machine and condensing side, including a "Shipley" flooded atmospheric ammonia condenser, also 1,925 feet of 2-inch full weight wrought iron direct expansion piping.

The Mono Service Cream Company, of Knoxville, Tenn.; have doubled the capacity of their refrigerating plant by the installation of another 25-ton horizontal double-acting belt driven York Refrigerating machine and condensing side complete, including two "Shipley" flooded double pipe ammonia condensers, also a 15-ton brine storage tank and miscellaneous material. Their first 25-ton York machine of the same type was installed about three years ago.

Border City Ice & Coal Company, Van Buren, Ark.; a 35-ton flooded freezing system complete, also a double pipe distilled water cooler, 17 feet 6 inches long, 8 pipes high, made of 1½-inch and 2-inch pipe, and 6 "Shipley" flooded atmospheric ammonia condensers, each 20 feet long, 12 pipes high, made of 2-inch pipe.

Saxon Realty Company, Detroit, Mich.; one 8-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete. This installation was made for the Michigan-Parfay Co., of Detroit, Mich., and will be used for cooling water and soft drinks.

Salida Creamery Company, Salida, Col.; one 4-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

Great Falls Meat Company, Great Falls, Mont.; two 12-ton vertical single-acting belt driven enclosed type refrigerating machines and high pressure side complete.

Buhr-Plaff Candy Company, Cincinnati, Ohio; one 12-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete. This plant was installed by the C. M. Robinson Company, of Cincinnati, Ohio.

City Creamery Company, Kansas City, Mo.; one 12-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

August Coldeway creamery, Norwood, Ohio; one 3-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete. This installation was made by the C. M. Robinson Company, of Cincinnati, Ohio.

Chas. L. Earle, 608 Elm Street, Arlington, N. J.; one 2-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

Keystone Creamery Company, York, Nebraska; one 8-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

Cooper Mercantile Company, general store, Pleasant Green, Utah; one 2-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

St. Johns General Hospital, Pittsburgh, Pa.; one 6-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

Woodward-Bennett Company, wholesale meats, Los Angeles, Cal.; one 20-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

Scholtz Drug Company, Denver, Colo.; one 2-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

Border City Ice & Cold Storage Company, Heavener, Okla.; one 20-ton vertical single-acting enclosed type refrigerating machine, direct connected to a vertical enclosed type slide valve engine, and condensing side, including two "Shipley" flooded atmospheric ammonia condensers, also the necessary apparatus and equipment to change their freezing system to the York flooded system, and 360 feet of 1½-inch full weight direct expansion piping.

Key City Light & Power Company, Port Townsend, Wash.; one 12-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

J. E. Parker Company, poultry, butter and eggs, Eaton, Ohio; one 6-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete. This plant was installed by the C. M. Robinson Company, of Cincinnati, Ohio.

Versailles Ice Company, Versailles, Ky.; one 20-ton vertical single-acting belt driven enclosed type refrigerating machine and high

pressure side complete. This installation was made by the C. M. Robinson Company, of Cincinnati, Ohio.

Montana Dairy Company, Butte, Mont.; one 12-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

Nevada Ice & Coal Company, Nevada, Iowa; one 15-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

The Furnas Ice Cream Company, Birmingham, Ala.; one 12-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

Hildebrecht Ice Cream Company, Trenton, N. J.; one 15-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete, also a 20-ton sheet and tube brine cooler.

Farmers Co-operative Creamery Company, Ogilvie, Minn.; one 6-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

Abercrombie & Fitch, Madison Ave. and 45th St., New York, N. Y., a one-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete. This plant was installed for J. McCullagh, of New York, N. Y.

Appleton Pure Milk Company, Appleton, Wis.; one 6-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

Henry Hughes, 26th St. & Susquehanna Ave., Philadelphia, Pa.; one 4-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete. This plant was installed for the West Philadelphia Stock Yards.

Elks Club, Dayton, Ohio; one 4-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

Godahl Creamery Company, St. James, Minn.; one 4-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

Larson Brothers, meats, Lyle, Minn.; a two-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

Lohrey Packing Company, Cincinnati, Ohio; one 20-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

Freeman Dairy Company, Flint, Mich.; one 20-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

F. M. Dow, residence, Portland, Maine; a one-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

Montgomery Chero-Cola Company, Meridian, Miss.; one 4-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

Fred P. Bell, grocery and meats, 5012 Baltimore St., Philadelphia, Pa.; one 4-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

Samuel H. Yeates, Glyndon, Md.; one 12-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

A. Rowe Sons Company, meats, Terre Haute, Ind.; one 8-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

Baton Rouge Coca Cola Company, Baton Rouge, La.; one 4-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete. This plant was installed by Chas. F. Rantz, of New Orleans, La.

The Sugar Creek Creamery Company, of Danville, Ill., have installed another 20-ton vertical single-acting belt driven enclosed type York refrigerating machine and high pressure side complete, which is the second one of like-type and capacity within a year.

(Continued on page 42.)

Chicago Section

We seem to feel better. Sounds like old times, eh?

It's an ill wind, etc., etc., etc. We've been eating too much, anyhow.

They haven't sand enough to be "filibusters." They're just cheap bluffers.

Board of Trade memberships are selling at \$6,900 net to the buyer. Gradually declining.

If "Les" Dacey is a "slacker," what kind of an epithet will fit those twelve Senators. Let's dance!

Some people are as far behind the times as 1776 and 1812, and some are up to date as far as 1862. Let's giggle!

Everybody is raising hob just now. A little later—say April—they'll be raising vegetables and things—in the back yard!

According to Water street markets the grocer is making 50 per cent. on his outlay for potatoes. And then they are raising hades about the loan sharks!

Swift & Company's sales of fresh beef in Chicago for the week ending Saturday, March 3, 1917, averaged as follows: Domestic beef, 12.67 cents per pound.

Tissue paper has nothing on the "Swiss cheese on rye," to say nothing of the air-pockets abounding therein. It's Wisconsin cheese, Swiss airholes!

All President Wilson has to do is to sit back and let the newspaper editor tell him what to do and how to do it. Like the boy who soiled his pants, Bill knows all about it.

"Owing to an open winter and the rise in water, ice is to be considerably higher this summer," says the Ice Man. Funny how the "old feelin'" will come over these guys, ain't it? Same as a burglar when he's been outa the pen awhile.

After all, war may be a blessing in disguise to thousands who have no money and

little excuse for living (to say nothing of the cost), and cannot afford to die except at government expense. Hence, bring on the doggone old war!

Whisper! Jack Hall (you know the great and only John W.) is in training for a white hope. Hard as nails, and has taken five inches off the "over the building line" section of his anatomy. He is an enthusiastic physical training bug now.

It is reported on good authority that millers are paying \$2.10 for desirable wheat, and expect to pay more. And yet despite high prices for the necessities of life, poor people can afford to pay for Bryan's and other vaudeville acts. Don't forget to tip the waiter.

Threats of assassination have been made against Joe Griffin, president of the Board of Trade, J. Ogden Armour, Nelson Morris and Tom Wilson, so it is reported. If anyone should be assassinated it's Jim Poole, who is talking freely of fifteen cent hogs. Goldurnhim!

"Whisky," said an old "wet," now "dry," citizen, "ain't whisky at all these days. No two brands taste alike going down or coming up, and every brand has a different effect. One is full of ideas—too many, in fact; another is absolutely non compositions; another is full of weeps, another of fight, and so on!" High time the business, or rather evil, were squashed before we all go bugs!

W. L. Gregson writes to The National Provisioner of the provision situation as follows: "The further evidence of a present shortage of marketable hogs has been the outstanding feature affecting hog product this week, and coupled with domestic and foreign political conditions, brought in a new class of buyers. The trade has broadened and the market is no longer subject to purely local conditions. Lard continues to lead in interest, but ribs were in better demand than formerly. Some

very close followers of the world's food supply conditions are venturing the opinion that a shortage in marketable live hogs at this time borders on a calamity."

Thousands of friends of Frank J. Sullivan, the Detroit packer, will be sorry to hear of the death of his brother, Donald W. Sullivan, 22 years old, killed in an automobile accident at Detroit on Wednesday, February 28. After finishing his education at the University of Detroit he went with his brothers to learn the packing business, and was making rapid progress until this unfortunate accident ended his promising career. He is survived by his mother, two brothers, Frank J. and James Jr., and four sisters, Mrs. T. J. Thompson, Mrs. J. H. Thompson, Mrs. H. Dawson and Mrs. T. Moran. Interment was at Mt. Olivet Cemetery, Saturday morning, March 3. Chicago friends tender their heartfelt sympathy to his bereaved family.

W. G. Press & Co. say: "Hogs and contract hog products had a setback Tuesday which was natural after the big advance the markets had made during the past few days. One week ago today the top on hogs was \$13.35, last Saturday the top was \$13.90, yesterday the top was \$14.75 and today the top is \$15, although it is rumored that \$15.05 was paid, but this quotation has not been confirmed at this writing. This is \$1.10 advance in live hogs in three market days, and \$1.45 advance in one week—a remarkable showing, when you consider the very poor trade for fresh pork in Chicago this week and the demoralized trade for all kinds of meats in the East. Hogs advanced too fast in face of the dull trade the last few days. The break in hogs started liquidation in pork, lard and ribs and we think for the present conservatism is advisable on the buying side of provisions. While we are friendly to the buying side of provisions, it must be kept in mind that provisions have had a steady advance for some time, and with such high prices as the present a nasty break can be had."

Established 1877
W. G. PRESS & CO.
175 W. Jackson Blv'd, Chicago
PORK LARD SHORTRIBS
For Future Delivery
GRAIN Correspondence Solicited STOCKS

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Williams machines are also suitable for Tankage, Cracklings, Beef Scrap, Oyster and Clam Shells, and any other material found around the packing plant requiring crushing or grinding.

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General Sales Dept., Old Colony Bldg.

CHICAGO

288 Market St.,
SAN FRANCISCO

Works:
ST. LOUIS

Watch Page 48 for Business Opportunities

March 10, 1917

CHICAGO LIVE STOCK

RECEIPTS.

	Cattle.	Calves.	Hogs.	Sheep.
Monday, Feb. 26....	16,430	1,321	60,502	18,671
Tuesday, Feb. 27....	6,088	4,544	21,183	14,348
Wednesday, Feb. 28....	13,948	2,104	20,523	10,948
Thursday, March 1....	6,473	2,687	23,873	10,128
Friday, March 2....	1,989	772	17,691	5,443
Saturday, March 3....	751	39	13,424	90
Total last week....	45,659	11,467	166,196	59,925
Previous week.....	61,212	11,404	196,237	77,274
Cor. week, 1916....	44,559	10,439	181,191	65,148
Cor. week, 1915....	39,464	8,433	165,101	58,812

SHIPMENTS.

	Cattle.	Calves.	Hogs.	Sheep.
Monday, Feb. 26....	3,210	58	16,761	1,726
Tuesday, Feb. 27....	1,100	56	4,265	2,450
Wednesday, Feb. 28....	3,200	63	6,094	833
Thursday, March 1....	2,700	8	4,451	1,789
Friday, March 2....	1,614	67	7,492	436
Saturday, March 3....	401	4	4,387	...
Total last week....	12,225	356	43,450	7,231
Previous week.....	16,956	678	60,528	9,639
Cor. week, 1916....	10,817	608	45,135	15,320
Cor. week, 1915....	8,657	392	32,018	7,172

CHICAGO TOTAL RECEIPTS LIVESTOCK.

	Cattle.	Hogs.	Sheep.
Year to March 3, 1917....	524,012	1,969,866	604,627
Same period, 1916.....	441,503	2,267,629	673,313
Combined receipts of hogs at eleven points:			
Week ending March 3, 1917.....	557,000		
Previous week.....	625,000		
Cor. week, 1916.....	581,000		
Cor. week, 1915.....	568,000		
Total year to date.....	6,379,000		
Same period, 1916.....	7,282,000		
Same period, 1915.....	6,108,000		

Receipts at seven points (Chicago, Kansas City, Omaha, St. Louis, St. Joseph, Sioux City, St. Paul) as follows:

	Cattle.	Hogs.	Sheep.
Week to March 3, 1917....	146,900	491,900	151,200
Previous week.....	165,700	558,400	216,500
Same period, 1916.....	138,700	508,700	180,400
Same period, 1915.....	120,800	478,200	182,400

Combined receipts at seven markets for 1917 to March 3, 1917, and the same period a year ago:

	1917.	1916.
Cattle.....	1,550,000	1,364,000
Hogs.....	5,452,000	6,289,000
Sheep.....	1,822,000	1,872,000

CHICAGO PACKERS' HOG SLAUGHTER.

	Week ending March 3, 1917:	22,300
Armour & Co.....	18,100	
Swift & Co.....	10,400	
Wilson & Co.....	8,300	
Morris & Co.....	4,700	
Hammond & Co.....	10,100	
Western P. Co.....	9,600	
Anglo-American.....	8,700	
Independent Packing Co.....	5,800	
Boyd-Lunham.....	3,800	
Roberts & Oake.....	3,900	
Brennan Packing Co.....	3,400	
Miller & Hart.....	19,000	
Others.....	122,100	
Totals.....	141,000	
Total last week.....	138,900	
Total corresponding week, 1916.....	141,300	
Total corresponding week, 1915.....	141,300	

WEEKLY AVERAGE PRICE OF LIVESTOCK.

	Cattle.	Hogs.	Sheep.	Lambs.
This week.....	\$10.55	*\$13.25	*\$11.50	\$14.00
Previous week.....	10.45	12.65	11.45	14.30
Cor. week, 1916.....	8.50	8.85	7.90	11.00
Cor. week, 1915.....	8.00	6.70	7.40	9.50
Cor. week, 1914.....	8.60	8.00	5.85	7.55
Cor. week, 1913.....	7.10	6.50	4.90	6.75
Cor. week, 1912.....	6.30	7.03	4.55	6.10

*Record.

CATTLE.

	Good to choice steers.....	\$10.00@12.15
Yearlings, good to choice.....	10.50@11.35	
Fair to good steers.....	9.00@10.00	
Stockers and feeders.....	7.00@ 8.35	
Fair to good cows.....	6.00@ 8.25	
Good to choice heifers.....	7.00@ 9.00	
Canners.....	4.50@ 5.25	

Cutters	5.00@ 6.00
Bologna bulls	6.75@ 7.75
Butcher bulls	7.00@ 9.00
Good to prime calves	10.00@11.25

HOGS.

Prime light butchers.....	\$13.90@14.25
Fair to fancy light.....	13.75@14.10
Medium weight butchers, 200-250 lbs.....	14.00@14.30
Prime heavy wt. butchers, 250-240 lbs.....	14.10@14.15
Choice heavy packing.....	13.90@13.90
Rough heavy packing.....	11.00@13.25
Pigs, fair to good.....	11.00@14.50
Stags (subject to 50 lbs. dockage).....	11.00@14.50

SHEEP.

Yearlings	\$11.90@13.75
Fair to choice ewes.....	9.00@12.00
Wethers, fair to choice.....	11.00@12.50
Western lambs	13.50@14.73
Feeding lambs	13.00@13.90
Native lambs	13.00@14.00

CHICAGO PROVISION MARKET

Range of Prices.

SATURDAY, MARCH 3, 1917.

	Open.	High.	Low.	Close.
PORK—(Per bbl.)—				
May	\$32.75	\$33.30	\$32.75	\$33.30
July	32.40	32.60	32.25	\$32.60

LARD—(Per 100 lbs.)—				
May	18.80	19.07	18.80	\$19.00
July	18.80	18.92	18.80	\$18.95

RIBS—(Boxed, 25c. more than loose)—				
May	17.40	17.60	17.40	17.55
July	17.50	17.62	17.47	\$17.57

MONDAY, MARCH 5, 1917.

PORK—(Per bbl.)—				
May	33.50	33.90	33.40	33.80
July	33.30	33.45	33.25	\$33.25

LARD—(Per 100 lbs.)—				
May	19.25	19.52	19.25	\$19.35
July	19.25	19.50	19.35	\$19.42

RIBS—(Boxed, 25c. more than loose)—				
May	17.90	17.92	17.75	\$17.87
July	17.90	17.97	17.80	\$17.90

TUESDAY, MARCH 6, 1917.

PORK—(Per bbl.)—				
May	33.95	34.00	33.80	33.90
July	33.37	33.42	33.37	33.37

LARD—(Per 100 lbs.)—				
May	19.37	19.40	18.70	18.95
July	19.42	19.42	18.75	\$18.95

RIBS—(Boxed, 25c. more than loose)—				
May	17.87	17.87	17.42	17.37
July	17.90	17.90	17.50	\$17.60

THURSDAY, MARCH 8, 1917.

PORK—(Per bbl.)—				
May	33.00	33.25	33.00	\$33.15
July	32.50	32.50	32.35	\$32.40

LARD—(Per 100 lbs.)—				
May	18.95	19.00	18.77	18.92
July	18.92	18.97	18.75	\$18.87

RIBS—(Boxed, 25c. more than loose)—		</
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CHICAGO MARKET PRICES

WHOLESALE FRESH MEATS.

Carcass Beef.

Prime native steers	15 @ 16
Good native steers	14 @ 15
Native steers, medium	13 @ 14
Heifers, good	13 @ 14
Cows	11 @ 13
Hind Quarters, choice	18 @ 18
Fore Quarters, choice	13 @ 13
Beef Cuts.	
Beef Tenderloins, No. 1	35 @ 35
Beef Tenderloins, No. 2	32 @ 32
Steer Loins, No. 1	27 @ 27
Steer Loins, No. 2	21 @ 21
Steer Short Loins, No. 1	35 @ 35
Steer Short Loins, No. 2	26 @ 26
Cow Loins	13 @ 16 1/2
Steer Loin Ends (hips)	20 @ 20
Cow Short Loins	15 @ 20
Cow Loin Ends (hips)	15 @ 15
Sirloin Butts, No. 3	16 @ 19
Strip Loins, No. 3	12 @ 12
Steer Ribs, No. 1	18 @ 18
Steer Ribs, No. 2	17 @ 17
Cow Ribs, No. 1	14 @ 14
Cow Ribs, No. 2	12 @ 13
Cow Ribs, No. 3	11 @ 11
Rolls	13 @ 13
Steer Rounds, No. 1	14 @ 14
Steer Rounds, No. 2	13 @ 13
Cow Rounds	11 @ 11
Flank Steak	16 @ 16
Rump Butts	16 @ 16
Steer Chucks, No. 1	12 @ 12
Steer Chucks, No. 2	10 @ 10
Cow Chucks	14 @ 14
Boneless Chucks	11 @ 11
Steer Plates	12 @ 12
Medium Plates	11 @ 11
Briskets, No. 1	14 @ 14
Briskets, No. 2	13 @ 13
Shoulder Clods	13 @ 14
Steer Naval Ends	11 @ 11
Cow Naval Ends	10 @ 10
Fore Shanks	8 @ 8
Hind Shanks	6 @ 6
Hanging Tenderloins	12 @ 12
Trimmings	12 @ 13

Beef Offal.

Brains, per lb.	9 @ 10
Hearts	9 1/2 @ 10 1/2
Tongues	17 @ 17
Sweetbreads	25 @ 30
Ox Tail, per lb.	10 @ 12
Fresh Tripe, plain	6 @ 7
Fresh Tripe, H. C.	7 @ 7
Livers	8 1/2 @ 11
Kidneys, per lb.	7 @ 7

Veal.

Heavy Carcass, Veal	12 1/2 @ 14 1/2
Light Carcass	15 @ 16 1/2
Good Carcass	17 1/2 @ 18 1/2
Good Saddles	17 1/2 @ 19
Medium Racks	13 @ 13
Good Racks	16 @ 16 1/2

Veal Offal.

Brains, each	8 @ 10
Sweetbreads	45 @ 60
Calf Livers	24 @ 27
Heads, each	30 @ 30

Lambs.

Good Caul Lambs	18 @ 18
Round Dressed Lambs	20 @ 20
Saddles, Caul	20 @ 20
R. D. Lamb Forces	18 @ 18
Caul Lamb Forces	17 @ 17
R. D. Lamb Saddles	22 @ 22
Lamb Fries, per lb.	20 @ 20
Lamb Tongues, each	4 @ 4
Lamb Kidneys, per lb.	15 @ 15

Mutton.

Medium Sheep	17 @ 18
Good Sheep	18 @ 18
Medium Saddles	18 @ 18
Good Saddles	20 @ 20
Good Forces	18 @ 18
Medium Racks	15 @ 15
Mutton Legs	20 @ 20
Mutton Loins	15 @ 15
Mutton Stew	14 @ 14
Sheep Tongues, each	4 @ 4
Sheep Heads, each	9 @ 9

7

Fresh Pork, Etc.

Dressed Hogs	17 @ 22 1/2
Pork Loins	21 @ 21
Leaf Lard	35 @ 35
Tenderloins	15 @ 15
Spare Ribs	21 @ 21
Butts	13 @ 13
Sticks	16 1/2 @ 16 1/2
Trimmings	20 @ 20
Extra Lean Trimmings	11 @ 11
Tails	10 @ 10
Snots	7 @ 7
Pigs' Feet	7 @ 7
Pigs' Heads	9 @ 9
Blade Bones	9 @ 9
Blade Meat	9 1/2 @ 13 1/2
Cheek Meat	8 @ 8
Hog Livers, per lb.	6 1/2 @ 8
Neck Bones	7 @ 7
Skinned Shoulders	19 @ 19
Pork Hearts	11 @ 11
Pork Kidneys, per lb.	10 @ 10
Pork Tongues	19 @ 19
Skin Bones	9 @ 9
Tail Bones	8 @ 8
Brains	7 1/2 @ 8
Backfat	19 @ 19
Hams	21 @ 21
Calas	17 @ 17

Bellies Shoulder SAUSAGE.

Bellies	20 @ 20
Shoulder	17 @ 17
Columbia Cloth Bologna	13 @ 13
Bologna, large, long, round, in casings	14 1/2 @ 14 1/2
Choice Bologna	17 1/2 @ 17 1/2
Frankfurters	11 1/4 @ 11 1/4
Liver, with beef and pork	15 @ 15
Tongue and blood	15 @ 15
Minced Sausage	23 1/2 @ 23 1/2
New England Sausage	13 @ 13
Prepared Luncheon Sausage	23 1/2 @ 23 1/2
Special Compressed Sausage	19 @ 19
Berliner Sausage	21 @ 21
Oxford Lean Butts	24 1/2 @ 24 1/2
Polish Sausage	15 @ 15
Garlic Sausage	14 1/2 @ 14 1/2
Country Smoked Sausage	17 1/2 @ 17 1/2
Country Sausage, fresh	20 1/2 @ 20 1/2
Pork Sausage, bulk or link	17 1/2 @ 17 1/2
Pork Sausage, short link	18 @ 18
Boneless lean butts in casings	31 1/2 @ 31 1/2
Luncheon Roll	23 1/2 @ 23 1/2
Delicatessen Roll	17 1/2 @ 17 1/2
Jellied Roll	19 1/2 @ 19 1/2

Summer Sausage.

Best Summer H. C. (new)	—
German Salami	29 @ 29
Italian Salami (new goods)	32 1/2 @ 32 1/2
Holsteiner	23 1/2 @ 23 1/2
Mettwurst	22 1/2 @ 22 1/2
Farmer	25 1/2 @ 25 1/2
Cervelat, new	31 @ 31

Sausage in Brine.

Bologna, kits	1.80
Bologna, 1/2 @ 1/2	2.35 @ 2.35
Pork Link, kits	2.25
Pork Link, 1/2 @ 1/2	2.90 @ 2.90
Polish sausage, kits	2.25
Polish sausage, 1/2 @ 1/2	2.90 @ 2.90
Frankfurts, kits	2.15
Frankfurts, 1/2 @ 1/2	2.90 @ 2.90
Blood sausage, kits	1.90
Blood sausage, 1/2 @ 1/2	2.35 @ 2.35
Liver sausage, kits	1.80
Liver sausage, 1/2 @ 1/2	2.35 @ 2.35
Head cheese, kits	1.90
Head cheese, 1/2 @ 1/2	2.35 @ 2.35

VINEGAR PICKLED GOODS.

Pickled Pigs' Feet, in 200-lb. barrels	\$13.00
Pickled Plain Tripe, in 200-lb. barrels	16.00
Pickled H. C. Tripe, in 200-lb. barrels	18.50
Pickled Ox Lips, in 200-lb. barrels	21.00
Pickled Pork Snouts, in 200-lb. barrels	—

Sheep Tongues, Short Cut, barrels.

No. 1, 2 doz. to case.	\$2.15
No. 2, 1 or 2 doz. to case.	4.15
No. 3, 1 doz. to case.	14.50
No. 4, 1/2 doz. to case.	41.50

EXTRACT OF BEEF.

2-oz. jars, 1 doz. in box	\$2.85
4-oz. jars, 1 doz. in box	5.70
8-oz. jars, 1/2 doz. in box	10.75
16-oz. jars, 1/2 doz. in box	20.00

BARRELLED BEEF AND PORK.

Extra Plate Beef, 200-lb. barrels	@ 29.00
Plate Beef	@ 28.00

Prime Meats.

Prime Beef	—
Meat Beef	—
Beef Hams (220 lbs. to bbl.)	23.50
Rump Butts	36.00
Mess Pork	38.00
Clear Fat Backs	38.00
Family Back Pork	38.00
Lean Pork	32.50

LARD.

Pure lard, kettle rendered, per lb., tcs.	@ 21 1/2
Pure lard	@ 20 1/2
Lard, substitute, tcs.	14 1/2
Lard compounds	14 1/2
Coking oil, per gal., in barrels	1.05
Cooks' and bakers' shortening tubs	20 1/2

BUTTERINE.

1 to 6, natural color, solids, f. o. b. Chicago	16 @ 24
Cartons, rolls or prints, 1 lb.	17 @ 25
Cartons, rolls or prints, 2@5 lbs.	16 1/2 @ 24 1/2
Shortenings, 30@60 lbs. the tubs	18 @ 16

DRY SALT MEATS.

(Boxed). Loose are 1/4 c. less.	
Clear Bellies, 14@16 avg.	@ 19%
Clear Bellies, 18@20 avg.	@ 19%
Rib Bellies, 20@25 avg.	@ 19%
Fat Backs, 10@12 avg.	@ 18%
Fat Backs, 12@14 avg.	@ 18%
Fat Backs, 14@16 avg.	@ 19%
Extra Short Clears.	@ 18%
Extra Short Ribs.	@ 18%
D. S. Short Clears, 20@25 avg.	@ 19%
Butts	@ 16%

Bacon meats, 1/4 c. more.

Hams, 12 lbs., avg.	@ 22 1/2
Skinned Hams	@ 25
Cals, 4@6 lbs., avg.	@ 18
Cals, 6@12 lbs., avg.	@ 18
New York Shoulders, 8@12 lbs., avg.	@ 21
Breakfast Bacon, fancy	@ 21
Wide, 10@12 avg., and strip, 5@6 avg.	@ 25
Wide, 6@8 avg., and strip, 3@4.	@ 25
Rib Bacon, wide, 8@12 avg., and strip, 4@6 avg.	@ 25 1/2
Dried Beef Sets	@ 19
	@ 32

Dried Beef Insides	@ 34

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Retail Section

PRACTICAL TALKS WITH SHOP BUTCHERS

How a Southern Retailer Added to His Profits

Written for The National Provisioner by Arthur Loucks.

"Thatta-boy, Rastus, give'er another turn." Rastus, the darkey who officiates as major-domo of odd jobs for the Crescent Grocer Company, of Ruston, Louisiana, dealers in meats and groceries, took a hitch in his trousers, showed his white teeth in a broad grin, and, responding to the boss's challenge, gave the pig's tail another twist.

Of course, in reality, Rastus was turning the wheel of the lard press, but he liked to imagine he was twisting the pig's tail—it made fun out of the job. With every inch the wheel was turned, a little more lard oozed from the press and trickled into the pail.

Before William S. Moore, proprietor of the Crescent store, bought this contraption, several gallons of cracklings were wasted every time a batch of southern porkers was rendered into lard. Now Rastus squeezes the last drop of grease out of the pigs. The only waste is in the squeal, and Rastus is planning on harnessing that for a whistle.

More Profit In Each Twist

Moore did not get the press for nothing; it required an investment of a few dollars. But the expenditure has long since been returned in the extra yield of lard—the lard the Southern housewife uses in making delicious pie crust. Every twist that Rastus gives the "pig's tail" means just a little more profit for Moore. Herein lies the secret of his success as a retail butcher and grocer.

The lard rendering process that yields the last drop of fat is typical of Moore's methods. He takes advantage of every opportunity to get the most out of his business. He converts the strong arm of Rastus into a profit. A meat slicer and an electric sausage grinder make satisfied customers, and increase the sales. Modern office appliances aid him in finding his profit and loss.

Machine-made Profits

Before Moore installed the slicing machine he would sell six pounds of bacon on a good day. Now it is a dull day that does not see thirty pounds of sliced bacon go over the counter. The machine has paid for itself time and time again. Every slice of bacon sold means a little more profit for Moore.

The butcher presses a button and the electric sausage grinder converts a piece of meat into hamburg steak before the housewife has time to adjust a hairpin. A less progressive and ingenious retailer would be frightened by the cost of the electric current. Moore pays for his "juice" from the sale of the bones ground for chicken feed.

This Ruston market and store has about it an atmosphere of prosperity. The stock is attractively arranged. Glass show cases act as silent salesmen. Two of the latest cash registers, two computation scales, a credit register and a figuring machine make up the

equipment that indicates the proprietor's desire for figure facts about his business.

Moore's success in the retail meat and grocery business is little short of remarkable. Five years ago he had \$1,000 in cash, the saving of years. Today he figures that he is worth close to \$15,000, and every dollar of it was honestly made. Most men would be more than proud of such an achievement.

This dynamic Southerner learned that he could buy a store, stock and good will, for \$4,000. He managed to borrow \$1,000, and with the thousand he had in the ginger jar negotiated the deal, paying \$2,000 down. In the course of the first year he paid \$1,800 on the balance. Moore had to scrimp a little, but there was satisfaction in doing this. The minute the burden of debt was lifted, Moore turned his attention to improving his business by making his store more attractive—the instinctive pride of ownership was growing on him.

System, But Not Too Much of It

Moore believes in knowing his business from the ground up, but he doesn't believe in loading himself down with system. His methods are very simple. Right from the beginning he kept a record of the daily sales, both cash and credit. The conditions in Ruston are such that a retailer does not have to keep a monthly record, payments being made by the week. About 25 per cent of his sales are in cash.

The sales in the meat and grocery departments are kept separate so that the proprietor may know just how each department is paying. He figures that if his stock is not turned over once a month he is losing money.

Moore keeps the totals of the amount owed him and the amount he owes right before him. By adding the total of the sales from day to day and subtracting the money received, he gets the amount owed him. If this amount becomes top heavy, he hustles up the collections. When the amount he owes becomes too great, he lets up on the buying until the correct balance is again established.

These figures are his business weather vane. He knows just which way the wind is blowing.

The additions on the cash and credit sales slips are checked each day on the figuring machine. Very often Moore, or one of the clerks, will make a mistake in a hurried mental addition—the human brain is not infallible. The machine detects all errors.

Moore takes great pride in the daily statement of his business. He knows just "where he is at" every night before he locks the door. This butcher and grocer cannot afford to employ a bookkeeper, but he has found a way to keep an eagle eye on his business. It will be a long time before any-

one sees Moore's name enrolled in the yearly list of 22,000 or more business failures.

LOCAL AND PERSONAL.

A meat market has been opened at 124 West High street, Lima, Ohio, by Wilbur Robnolt.

Charles E. Heit's meat market on Main street, Shortsville, N. Y., has been damaged by fire.

A petition in bankruptcy has been filed by Avery U. Rockwood, a meat and provision dealer at 191 Main street and West Walnut street, Milford, Mass. Liabilities \$1,906 and assets \$1,887.

A new market has been opened by L. E. Blake and Harry Severance in the Depot Store at Hill, N. H.

The meat market on Railroad street, Canaan, Conn., conducted by David D. Walter, has been destroyed by fire.

Eugene Weeks has sold the North Main street meat market in Castile, N. Y., to James A. Corrigan.

It is reported that the East Market Street Businessmen's Association of Saratoga Springs, N. Y., is planning the erection of a large public market.

James Lister, a butcher, died at his home on the Bridgewater road, Brookhaven, Chester, Pa., from paralysis.

Mr. Timberlake has moved his meat business from Lisbon street to 180 Turner street, Auburn, Maine. He will add a grocery department to his new store.

The Chamber of Commerce of Middletown, N. Y., is much interested in the establishment of a public market on Center street.

The Ansonia Meat Market, Ansonia, Conn., has been destroyed by fire.

Michael Clancy will move his meat business from Park street to the Riley block, North Adams, Mass.

Joseph Desko's meat and grocery market at 128 Bell avenue, McKees Rocks, Pa., has been destroyed by fire.

John Lorenzen will remodel his meat and grocery market building at 830 Brown street, Davenport, Iowa.

Harry Riggle and Harry Quigley have purchased the Forshep Meat Market in Warrwood, W. Va.

Gustav Peters, a butcher, was found dead in his home at 221 East Broadway, St. Louis, Mo. Death was due to natural causes.

John Lawson's meat market, south of Norwood, in what is known as "Love Town," Ind., has been destroyed by fire.

George W. Arp, formerly in the butcher business, died at his home on DeKalb street, Morristown, Pa., from heart disease.

The Heins Cash Market in DeKalb, Ill., will move to a new location.

A company is being formed and plans are being drawn for the construction of a four-story market to be known as the Central Market. It is reported this market will cost more than \$250,000 and will be located on Grand avenue, Milwaukee, Wis.

Edward Schwitzer, 42 years old, a butcher, died at his home, 1651 Story avenue, Louisville, Ky., from pulmonary hemorrhage.

Charles Edson's meat market in York, Neb., has been destroyed by fire.

E. W. Poor's meat and grocery market, Mt. Ayr, Iowa, has been purchased by William and Frank Dowling.

Patrick Cronin, formerly in the meat business, died at his home, 172 Denver avenue, Bridgeport, Conn., from stomach trouble.

Improvements are being made in T. J. Reynolds' meat market on Bridge street, Ashtabula, Ohio.

Mark Reynolds has purchased the Karg grocery and meat business on King street, Mount Holly, N. J.

Farmers' Home Meat Market, 1036 First avenue North, Moorhead, N. D., has been destroyed by fire.

H. A. Wright has purchased the Durant Meat Market, Durant, Okla.

Ladd Bros. have opened a meat shop on the west side of Main street, Shattuck, Okla.

The City Meat Market, Jennings, Okla., has been opened for business.

Perry Shaw, proprietor of the meat market in Bloomville, N. Y., died from apoplexy.

W. W. Schultz has purchased the meat market on Carter street, Elmhurst, N. Y., which he recently sold to J. J. Walters.

Charles E. Vance has sold his meat market at Red Wing, Minn.

Mel Ostrander, who has conducted the City Meat Market at Arthur, N. D., for the past thirty years, has sold it to Anton Johnson and Victor Larsen.

C. L. Horrell has purchased the butcher shop and restaurant in Fisk, Mo., formerly conducted by Mrs. John Craven.

Fire of unknown origin destroyed M. F. Godden's butcher shop in Corydon, Iowa.

James Steachan, grocer and provision dealer, Winterset, Medford, Mass., has filed a petition in bankruptcy. Liabilities \$664 and assets \$225.

John H. Murphy will dispose of his meat and grocery store at 500 Main street, New Britain, Conn.

Henry Drees has purchased the meat market in Peshtigo, Wis., formerly conducted by Frank Swidenglanz.

Schill & Rietzow have dissolved partnership and John Rietzow will continue the meat market in Edgar, Wis., alone.

Walter Moss will open a meat market in Dane, Wis.

H. W. Bluenck will open a meat market in Crivitz, Wis.

The grocery and meat market at Wakonta, S. D., conducted by Devine & Aldrich, has been destroyed by fire.

E. D. Schenck has sold his meat market in Eldora, Iowa, to John Nissen.

B. L. Petzke bought the Central Meat Market in Arlington, Minn.

Daniel & H. J. McGowan bought the Robison meat market in Benson, Minn.

The Minnesota Meat Company, Minneapolis, Minn., will open a downtown meat market at 725 Hennepin avenue.

O. E. Williamson has sold his meat market in Owatonna, Minn., to Edson Squires.

A. R. Ledin opened a meat market in Stacy, Minn.

N. H. Danmer bought a meat market in Delmont, S. D.

D. E. Vickers sold his meat market in Pierpont, S. D., to J. N. Knutson.

Frank Ruzick has resumed the meat business at Battle Creek, Neb.

A. J. Kisor has sold his meat and grocery business in New Sharon, Iowa, to Albert Christianson.

Mr. Milanese has succeeded to the meat and grocery business of Gualco & Milanese in Oakland, Cal.

Mrs. R. U. Young has purchased the meat and grocery business of J. A. Johnson at 3528 North Broadway, Los Angeles, Cal.

J. A. Scott has sold out his interest in the meat business in El Dorado, Kan., to his partner, C. C. Cooper.

Noah Wenger has sold his meat market, slaughterhouse and refrigerating plant in Nashville, Mich., to Henry Roe.

Caldwell & Hoekzema have succeeded to the retail meat business of Raymond A. Caldwell in Grandville, Mich., but Mr. Caldwell will continue the wholesale meat business alone.

Henry Schmidt has purchased the business of the Wibaux Provision Company, Wibaux, Mont.

Frank Raska is about to open a new meat market in Hemingford, Neb.

Earl Angus has sold out his meat business in Wisner, Neb.

SATURATED AMMONIA VAPOR.

(Concluded from page 34.)

ammonia which passes the expansion valve is vaporized by the heat and the number of heat units taken up by each pound is given in the sixth column of the ammonia table. The constants really mean the load of heat which each pound of ammonia is capable of carrying from the produce to the ammonia condenser. This is also called latent heat as it changes the state or form of the ammonia but does not change the temperature.

With a gauge pressure of 15.67 pounds in the evaporating coils the number of B. t. u. is 555.5. If this pressure is raised to 30.18 pounds the number of B. t. u. is 545.01. By this we see that the higher the pressure the fewer heat units are absorbed during vaporization. This is seen in the more rapid lowering of temperature in a room when the lower back pressure is carried. If only the evaporating coils in a refrigerating plant were considered the greatest amount of work would be done at the lowest back pressure carried.

The seventh, eighth, ninth and tenth columns are self-explanatory as they deal simply with volume and weight of liquid and vapor.

The refrigerating capacity of an ammonia compressor is based on the number of pounds of vapor handled. The greater the weight the greater the capacity.

By looking at the constants in the seventh column we see that the volume of vapor in cubic feet per pound decreases rapidly with the rising pressure and temperature. As this is so the capacity of the ammonia compressor is greatest at the highest back pressure possible to carry. This pressure is regulated to give the desired temperature necessary to extract heat from the refrigerated produce. Then if a machine is working on freezers that are held at a temperature of zero the back pressure must be about 9 pounds gauge to give the ammonia a chance to vaporize and thus take up heat at the low temperature. This is necessary so as to have a difference in temperature between the atmosphere in the room and the ammonia in the coil. We know if the pressure were 15.67 pounds the temperature of the ammonia would be zero and there would be no exchange of heat from the zero room.

The greater number of square feet of coil surface to a given sized room the closer these two temperatures can approach. Where coil surface is lacking the pressure must be lowered to provide for the necessary transfer of heat.

Now, with 9 pounds pressure the temperature of the vaporizing ammonia is 10 degrees below zero, and each pound of ammonia vapor occupies about 11.38 cubic feet. If the pressure is raised to 15.67 pounds with a corresponding temperature of zero the volume of 1 pound vapor is only 9 cubic feet. Therefore, the higher the pressure at which the saturated vapor is admitted to the compressor the greater the weight of ammonia handled and the greater the actual capacity of the machine.

But here it must be stated that but very seldom, if ever, does the vapor remain in a saturated state after it passes the suction valves of the compressor. It is superheated to some extent which varies with the conditions of the plant and the type of the ammonia compressor.

The temperature of the ammonia in the cylinder at the end of the suction stroke is often over 100 degrees. Liquid injection into the cylinder is one means of keeping the vapor in as nearly a saturated state as possible.

HIDE AND SKIN MARKETS.

(Concluded from page 30.)

A sale is noted of a car of New York cities 5 to 7s, 7 to 9s and 9 to 12s at \$4.50, \$5 and \$5.50. New York cities are nominally quoted at \$4.50, \$5 and \$5.50 for the three grades of weights. An advance of 5c. per pound is noted on New York city green skins to butchers. Outside skins are in good demand. Mixed cities and countries are quoted around \$4, \$4.50 and \$5, and countries at \$3.50, \$4 and \$4.50. Kips are in good demand. Last sales of 12 to 17 lbs. were made at \$6.75 and 17 lbs. and up sold at \$8.

HORSEHIDES.—Trading is a little more active. A sale is noted of a car of western hides nearly all straight cities at \$10. An offering is noted of about 1,000 hides at \$9 with No. 2's offered at \$8.50. Countries are quoted around \$8.50@\$8.75; mixed hides at \$9@\$9.25, and city renderers are quoted at \$9.75@10. Twenty-one inch and up butts are offered at \$3.75, and about \$3.50 is asked for 20 inch butts. Some sales have been noted in the west of large lots of 21 inch and up butts at \$3.75.

Boston.

Country hides look a little firmer in Boston, but no more active. Dealers are asking stronger prices on country hides because of the small kill and the very few good hides that are on the market. Tanners would bid a cent to a cent and a half less than asking prices for best Ohio extremes, but dealers are not disposed to sell at such figures. Extremes range in price from 26@28c., depending upon quality, takeoff, etc. Buffs are quiet in this market. Only one or two tanners are interested and their bids are far below the asking prices or what dealers would expect. Quotations range from 22½@24½c. The southern market is quiet in Boston. Dealers from that section say that they are selling a great many of their hides to sole leather tanners, and even some cars of 25 to 60's have been sold to a sole leather tanner. Far southerns are offered at 22@22½c.

GOVERNMENT QUOTES MEAT PRICES.

The United States Department of Agriculture Office of Markets gives on the authority of its agents the following wholesale market quotations for March 8 on fresh beef, Western dressed, in the three cities named:

Boston. New York. Philadelphia.

Native steers:		
Choice	\$14.75—15.25	\$14.50—15.00
Good	14.00—14.50	14.00—14.50
Medium	13.50—14.00	13.50—14.00
Common	13.00—13.50	13.00—13.50
Western steers:		
Good	13.50—14.00	12.50—13.50
Medium	12.00—12.50	12.00—13.00
Common	11.50—12.00	11.50—12.00
Texas steers:		
Good	12.25—13.25	12.00—12.75
Common	11.25—12.25	11.25—12.00
Heifers:		
Good	13.00—13.50	.....
Medium ....	.....	.....
Common ....	.....	.....
Cows:		
Good	12.50—13.00	12.00—13.00
Common	12.00—12.50	11.25—12.00
Bulls:		
Good	11.50—12.00	11.75—12.50
Common	11.00—11.50	11.25—11.75
	11.00—11.50	11.00—11.50

BEEF SPLITTERS

Foster Bros. brand



In general use in the principal packing houses of the country.

Ask for Cat. No. 17

SPLITTERS, CLEAVERS, KNIVES, STEELS, ETC.

JOHN CHATILLON & SONS

SCALE MAKERS SINCE 1835

NEW YORK

New York Section

James A. Coughlin, a butcher at No. 217 Columbus avenue, has been given his discharge from bankruptcy.

J. Ogden Armour spent last week at Atlantic City, but he was so quiet about it that it was not discovered until he had departed.

Swift & Company's sales of beef in New York City for the week ending March 3, 1917, averaged as follows: Domestic beef, 13.34 cents per pound.

A petition in bankruptcy has been filed against the Louis Grimm Company, the old-established dealers in bologna and provisions at No. 1427 Second avenue, by various creditors.

F. J. King, head of Swift & Company's provision department at Chicago, was in New York this week looking over the territory so ably administered by local provision manager T. C. Sullivan.

Frank P. Burek, of Brooklyn, has been made chairman of the local committee which will entertain the State convention of the United Master Butchers in June. O. E. Jahrsdoerfer is secretary. They will spend several thousand dollars entertaining the visitors and are planning a fine programme.

The following is a report of the number of pounds of meat, fish, poultry and game seized and destroyed in the City of New York during the week ending March 3, 1917, by the New York City Department of Health: Meat.—Manhattan, 2,532 lbs.; Brooklyn, 15,639 lbs.; Bronx, 4 lbs.; total, 18,175 lbs. Fish.—Manhattan, 48 lbs.; Brooklyn, 44 lbs.; total, 92 lbs. Poultry and Game.—Manhattan, 864 lbs.; Brooklyn, 26 lbs.; Bronx, 40 lbs.; total, 930 lbs.

The New York Merchants' Association is considering what action a commercial organization may take in order to ensure a supply of food adequate to the needs of New York and its economical distribution among consumers. After a preliminary discussion of the subject, the board of directors created a special committee to investigate and report. The committee held a meeting this week and discussed the basic agricultural and food problem of the city. The committee did not take up for consideration the Wicks bill nor any other proposed legislation, confining its discussion to whether or not an investigation of the general subject of the city's food supply should be undertaken, whether it ought to be undertaken and conducted by the Merchants' Association alone or in conjunction with other agencies, and whether the association could be instrumental in furthering the purpose in view by aiding in the creation of an agency for the comprehensive study of the problem.

EXHIBITS AT CULINARY SHOW.

At the fifty-first annual exhibition of the Societe Culinaire Philanthropique at the Grand Central Palace there were many fine exhibits of food of all kinds. The large hotel supply companies had fine exhibits of sides and quarters of beef and even whole cattle, dressed in Christmas style, sheep, lambs, calves, short loins and ribs, smoked meats, poultry and game, and all kinds of meat specialties. The cooked foods were wonderful to behold.

A particularly interesting booth was that of the Tropical Paint and Oil Company, of Cleveland, Ohio, who were showing their brewers' and packers' special enamel, which is considered the accepted thing in the packinghouse because it retards rust and resists acid and alkali fumes, and dries with a smooth, hard, yet elastic finish. Every packer knows what this means. The booth was in charge of Mr. George W. Lubke and Mr. C. D. Huber, two highly intelligent and suave gentlemen who were distributing handsome literature, answering questions and making friends all at the same time. The interests of the company were in good hands.

ST. LOUIS LIVESTOCK MARKETS.

(Concluded from page 31.)

medium to good to choice ones ranging from \$8@9.75. Regardless of these quotations it requires a very good heifer, indeed, to sell up to the \$10 mark, although there were some sales during the week of some mixed steers and heifers at \$11.25.

Hog receipts for the week are 64,000. This is a somewhat lighter run than this time a year ago and from all accounts in our shipping territory we can see no immediate prospects of the supply increasing. Prices in the hog department have risen so rapidly in the past two weeks that it is hard to keep track of them. An advance of 20@35c. a day is not an unusual occurrence. On Wednesday good heavy hogs reached the unprecedented figure of \$15 on this market, and this was paid on carload lots. The general quotations today are: Mixed and butchers, \$14.50@15; good heavy, \$14.85@15; rough, \$13.75@14.25; lights, \$14.35@14.75; pigs, \$10.25@13.50; bulk, \$14.50@14.90. The demand for hogs is the strongest we have ever seen, the packers, the outside order buyers and the local butchers are all extremely active.

Sheep receipts for the week are very small, only 4,000 head, and while there have been no strictly prime lambs amongst them yet we have to record a sale of a double deck of western lambs averaging 80 lbs. that sold on Wednesday at \$14.90; other sales the same day were made at \$14.75@14.80. Strictly prime lambs with proper finish would be worth on today's market \$15. Very high prices still obtain in the other departments in the sheep house. Mutton ewes are quoted at \$9.50@12; yearlings, \$12.25@13.50. Inadequate car supply in the west accounts in a large part for our short receipts just now.

YORK REFRIGERATING SALES.

(Concluded from page 35.)

Mr. F. Juruick, Allentown, Pa.; one 4-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete. This plant was installed for Nanthro Bros. (Dairy) of Allentown, Pa.

R. W. Rapp, ice cream, Bethlehem, Pa.; one 8-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete. This installation was

also made by Mr. M. F. Juruick, of Allentown, Pa.

Ottawa County Ice Company, Miami, Okla.; one 6-ton vertical single-acting enclosed type refrigerating machine, direct connected to a vertical enclosed type slide valve engine, and high pressure side complete.

Jersey Ice Cream Company, Schenectady, N. Y.; one 15-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

C. Limburg, butter and eggs, North Side, Pittsburgh, Pa.; one 8-ton vertical single-acting enclosed type belt driven refrigerating machine and high pressure side complete.

Spartanburg Coca Cola Company, Spartanburg, S. C.; one 6-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

J. V. Mast, ice cream and dairy, Newark, Ohio; one 8-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

C. P. Golumis Company, confectioners, Hazleton, Pa.; a two-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

Dixie Engineering & Insulating Company, Tampa, Fla.; one 2-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete. This plant was installed for D. F. Fisher, of Tampa, Fla.

Chas. A. Puff, 222 North Provision Street, Buffalo, N. Y.; one 8-ton vertical single-acting belt driven enclosed type refrigerating machine and high pressure side complete.

Armour & Company, steamship "Navajo," New York, N. Y.; a half-ton vertical single-acting enclosed type refrigerating machine, direct connected to a vertical enclosed type piston valve engine.

Grunewald Hotel Company, New Orleans, La.; a 75-ton shell and tube brine cooler, a 30-inch x 8-foot ammonia drier-cooler-purifier, and a 24-inch x 16-foot ammonia receiver.

Burdan Brothers, Pottstown, Pa.; 3 "Shipley" flooded atmospheric ammonia condensers, each 20-foot long, 12 pipes high, made of 2-inch pipe; a 24-inch x 7-foot vertical ammonia drier-cooler-purifier, and a 20-inch x 8-foot ammonia receiver.

Chicago Cold Storage Warehouse Company, See Terminal Warehouse, Chicago, Ill.; 27,000 feet of 2-inch full weight piping.

Leland Ice & Cold Storage Company, Leland, Miss.; the necessary material and apparatus for changing their freezing system to the flooded system and increasing the capacity by five tons, including a 30-inch x 8-foot ammonia drier-cooler-purifier and agitator, also a 30-ton vertical shell and tube steam condenser.

Independence Ice & Cold Storage Company, Independence, Mo.; 6 "Shipley" flooded atmospheric ammonia condensers, each 20 feet long, 12 pipes high, made of 2-inch pipe.

Railways Ice Company, Woodward, Okla.; 4 "Shipley" flooded atmospheric ammonia condensers, each 20 feet long, 12 pipes high, made of 2-inch pipe.

Arkansas & Texas Consolidated Ice & Coal Company, Eldorado, Ark.; 3 "Shipley" flooded double pipe ammonia condensers, each 18 feet 2 inches long, 8 pipes high, made of 2-inch and 3-inch pipe, also a 25-ton flat type steam condenser.

Arkansas & Texas Consolidated Ice & Coal Company, Pine Bluff, Ark.; a 60-ton vertical shell and tube steam condenser.

New England Dressed Meat & Wool Company, Somerville, Mass.; two 150-ton shell and tube brine coolers.

Croninger Packing Company, Shamokin, Pa.; 6 "Shipley" flooded atmospheric ammonia condensers, each 20 feet long, 12 pipes high, made of 2-inch pipe.

Gulfport Development Company, Gulfport,

Miss.; one 30-ton vertical ammonia drier-cooler-purifier and a 10-ton shell and tube brine cooler.

Mason Bros. Ice & Cold Storage Company, Lodi, Cal.; a 30-inch x 6-foot-9-inch shell and tube brine cooler for installation in their freezing tank.

Newport News & Hampton Railway, Gas & Electric Company, Hampton, Va.; one "Shipley" flooded atmospheric ammonia condenser, 20 feet long, 12 pipes high made of 2-inch pipe.

BIG INCREASE IN UNION TERMINAL.

The steady growth and continued success of the Union Terminal Cold Storage Company of Jersey City during the last ten years is due, in the opinion of users of cold storage, to the favorable location of the company's plant, which has enabled it to render to the public most economic and satisfactory service. Says an officer of the company:

"The export and import business of the United States is very rapidly increasing, and a large quantity of perishable food products is transferred from rail to steamship or vice versa at the Port of New York. This change from rail to lighter or float is being made principally on the Jersey side of the river. In this rapid development of the Port of New York the Jersey side of the Hudson river is forging to the front; it is natural that this should be so. It is not only the logical place for such transfer of freight, but it is being forced to Jersey City on account of congestion in the other parts of the port.

"All of the great railroad lines tapping the immense resources of the West and South have freight terminals on the west side of the Hudson river. The leading steamship companies in the South American trade in conjunction with the principal railroads and packing companies of both the United States

and South America have purchased property and are erecting two large docks and piers on the Jersey waterfront, from which piers and docks the principal part of all of the beef and provision products imported into and exported from this country will be handled.

"The advantage of having perishable food products stored at the terminals of railroads entering Jersey City is that such products can later on be delivered alongside steamship or to any point within the lighterage limits of New York harbor without additional freight charges."

T. A. Adams, president of the Union Terminal Cold Storage Company, stated that his company is enlarging its plant by the addition of about 2,000,000 cubic feet, which will give them a total storing capacity of about 5,000,000 cubic feet. This enlargement is being accomplished through the erection of two new buildings, one of which has just been completed, and work on the other is now under way. These buildings are of the most approved fireproof construction, as have been all of the additions to the plant of this company.

It is the object of the company to finance these new buildings without mortgage or bonded debt upon them, and for this purpose the capital stock has been increased from \$450,000 to \$750,000. Of the total capital \$500,000 is 8 per cent. preferred stock. This stock is preferred both as to dividends and assets and the dividends are cumulative. The stock has full voting power.

Mr. Adams also said, "I believe this 8 per cent. preferred stock to be a particularly safe and profitable investment. It is secured by the common stock of \$250,000 and by \$100,000 of earned surplus; and is therefore

secured by nearly double its amount in cash and real property. No 'good will' item has ever entered into the financing or accounting of the company; the operation of this plant is especially economical, the greatest care being exercised in the plans for construction, to build from the standpoint of the best service with the most economical operation.

"We are extending our plant in order to take care of the continued increased demands of our customers. We feel that our interests are theirs and to further establish the co-operation between this company and its patrons and to bring about a closer relation between us we have arranged to set aside about \$100,000 of this new issue of 8 per cent. preferred stock, which will be available to such of our patrons as desire to share in its benefits."

The company is under the same management as the Manhattan Refrigerating Company, Gansevoort and West Washington Markets, New York, and the Kings County Refrigerating Company, Wallabout Market, Brooklyn, N. Y. It is, therefore, in a position to give its patrons in the distribution of their perishable food products in the Metropolitan district all of the advantages arising from warehouses in each principal center of the district. The officers are: T. A. Adams, president; R. A. Adams, vice-president and treasurer, and Nicholas F. Brady, chairman of board. Nicholas F. Brady is president and chairman of the board of directors of some of the largest financial and industrial companies in the United States.



PLANT OF THE UNION TERMINAL COLD STORAGE CO., JERSEY CITY, N. J.

